Department of Development Services

Paula Daneluk, AICP, Director
Curtis Johnson, Assistant Director

7 County Center Drive
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buttecounty.net/dds

BUTTE COUNTY
NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION

NOTICE IS HEREBY GIVEN that Butte County has prepared an Initial Study in accordance with the California Environmental Quality Act (CEQA) and is considering the adoption of a Mitigated Negative Declaration for the project described below. The Mitigated Negative Declaration establishes that although the proposed project could have a significant effect on the environment, there will not be a significant effect because required mitigation measures will address potential project effects. The County has prepared this Notice of Intent to Adopt a Mitigated Negative Declaration to provide an opportunity for input from public agencies, organizations, and interested parties on the environmental analysis addressing the potential effects of the proposed project. The IS/MND is available for review on the County's website at https://www.buttecounty.net/363/California-Environmental-Quality-Act-CEQ.

Project Information

Project: La Porte Road Solar + Battery Energy Storage Use Permit (UP23-0005)

Location: The project site encompasses 17 acres of an 82-acre parcel at 5864 La Porte Road, immediately east of La Porte Road, in the community of Bangor, approximately .3 miles northeast of Oroville-Bangor Highway; APN: 028-240-061.

Project Description: Proposed Conditional Use Permit to construct and operate a 17-acre solar array facility and Battery Energy Storage System (BESS). The facility will generate up to 3 megawatts (MW) of alternating current solar energy using approximately 7,182 solar modules and 24 string inverters to convert the sun's energy. A single-axis tracking technology will allow the modules to track the sun efficiently throughout the day and maximize the efficiency of the solar collection. The facility will interconnect to PG&E's pre-existing electrical distribution system located on-site and be sold to PG&E through a long-term Power Purchase Agreement.

The Initial Study/Mitigated Negative Declaration (IS/MND) is on file for public review and comment starting **February 12, 2024,** to **March 12, 2024**. All comments for the IS/MND must be submitted in writing and received by **5:00 pm Tuesday, March 12, 2024**. Written comments may be submitted to the project planner, Rowland Hickel, Senior Planner, Butte County Development Services Department, Planning Division, 7 County Center Drive, Oroville, CA 95965. Phone: (530) 552-3684 Email: rhickel@buttecounty.net. The Butte County Planning Commission will consider the proposed project at a public hearing on a future date to be determined.

PAULA DANELUK, AICP, DIRECTOR OF DEVELOPMENT SERVICES

INITIAL STUDY AND ENVIRONMENTAL REVIEW CHECKLIST

California Environmental Quality Act (CEQA)

PROJECT INFORMATION

1.	Project Title:	La Porte Road Solar + Battery Energy Storage Use Permit (UP23-0005)
2.	Lead Agency Name and Address:	Butte County – Department of Development Services Planning Division 7 County Center Drive Oroville, CA 95965
3.	Contact Person and Phone Number:	Rowland Hickel, Senior Planner 530.552.3684 rhickel@buttecounty.net
4.	Project Location:	The project site encompasses 17 acres of an 82-acre parcel at 5864 La Porte Road, immediately east of La Porte Road. In the community of Bangor, approximately .3 miles northeast of Oroville-Bangor Highway. APN: 028-240-061.
5.	Project Sponsor's Name and Address:	RPCA Solar 11, LLC 44 Montgomery Street, Suite 3150 San Francisco, CA. 94104
6.	General Plan Designation:	Agricultural (AG)
7.	Zoning:	Agricultural, 20-acres (AG-20)

8. Description of Project: (Describe the whole action involved, including but not limited to later phases of the project and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)

   The applicant, RPCA Solar 11, LCC, is requesting a Conditional Use Permit to construct and operate the proposed La Porte Road Solar + Battery Energy Storage (BESS) Project (Project). The Project encompasses 17 acres of an 82-acre parcel in the community of Bangor in unincorporated Butte County. The Project will generate up to 3.0 megawatts (MW) of alternating current (AC) (4.2 MW direct current (DC)) of clean, reliable solar energy when complete. The BESS will charge and discharge a total of 3 megawatts (MW) alternating current (AC) of energy for up to a four-hour duration. The Project will interconnect to PG&E's pre-existing electrical distribution system located on-site. The power generated from this facility will be sold to PG&E through a long-term Power Purchase Agreement (PPA). All development will be focused in the southern portion of the site, south of a segment of Wilson Creek that bisects the property generally from east to west. The existing residence located on the northern portion of the parcel will be unaffected by the project.

   The Project will install approximately 7,182 solar modules and 24 string inverters to convert the sun's energy into usable AC power. Single-axis tracking technology will allow the modules to track the sun efficiently throughout the day and maximize the efficiency of solar collection. The modules will be mounted on a steel racking system,

which will be anchored into the ground using driven steel piers. The overall height of the arrays will be no more than 15 feet above ground level. A total of four separate arrays will be constructed to minimize impacts to existing oak trees and wetland areas and to allow travel corridors for area and migrating deer populations. An 8-foot security fence with an access gate will surround each array area. The four battery storage equipment pads will be located within a fenced area at the southwest corner of the site. All utility connections between the solar arrays, battery storage equipment, and the existing PG&E grid will be underground. Access will be via a new 12-foot wide gravel road from La Porte Road. The intersection with La Porte Road would be comprised of a paved apron per Butte County standards. The total fenced area would be approximately 17 acres. The road improvements would disturb approximately 40,000 square feet and require the removal of 0.10-acre of the oak canopy along the western site boundary. The battery storage pad would disturb approximately 27,000 square feet. The remainder of the 17-acre site would be undisturbed.

The Project will be unmanned and remotely operated following the completion of construction. As part of the long-term operations and maintenance, the project would generate six (6) regular trips (one person in one truck) annually to handle operational responsibilities, including solar panel washing, vegetation management, and equipment preventative maintenance.

The Project is scheduled to begin construction in June 2024. Construction activities will last 6 to 9 months. The Project will operate 365 days a year, 24 hours a day; however, the photovoltaic (PV) portion will only produce power during daylight hours. The Project is expected to have a useful life of approximately 35 years, at which time the facility will either be repowered or dismantled and removed from the site.

9. Surrounding Land Uses and Setting: (Briefly describe the project's surroundings)

The project site is a 17-acre portion of an 82-acre parcel. Project site elevations range between 784 feet to 947 feet above mean sea level. A segment of Wilson Creek bisects the 82-acre property southwest to northeast and is located 50–500 feet north of the lease area. Vegetation within the lease area includes oak woodland, non-native grasses, and star thistle and is currently used for grazing. One single-family residence is located on the property approximately 1,100 feet northeast of the lease area.

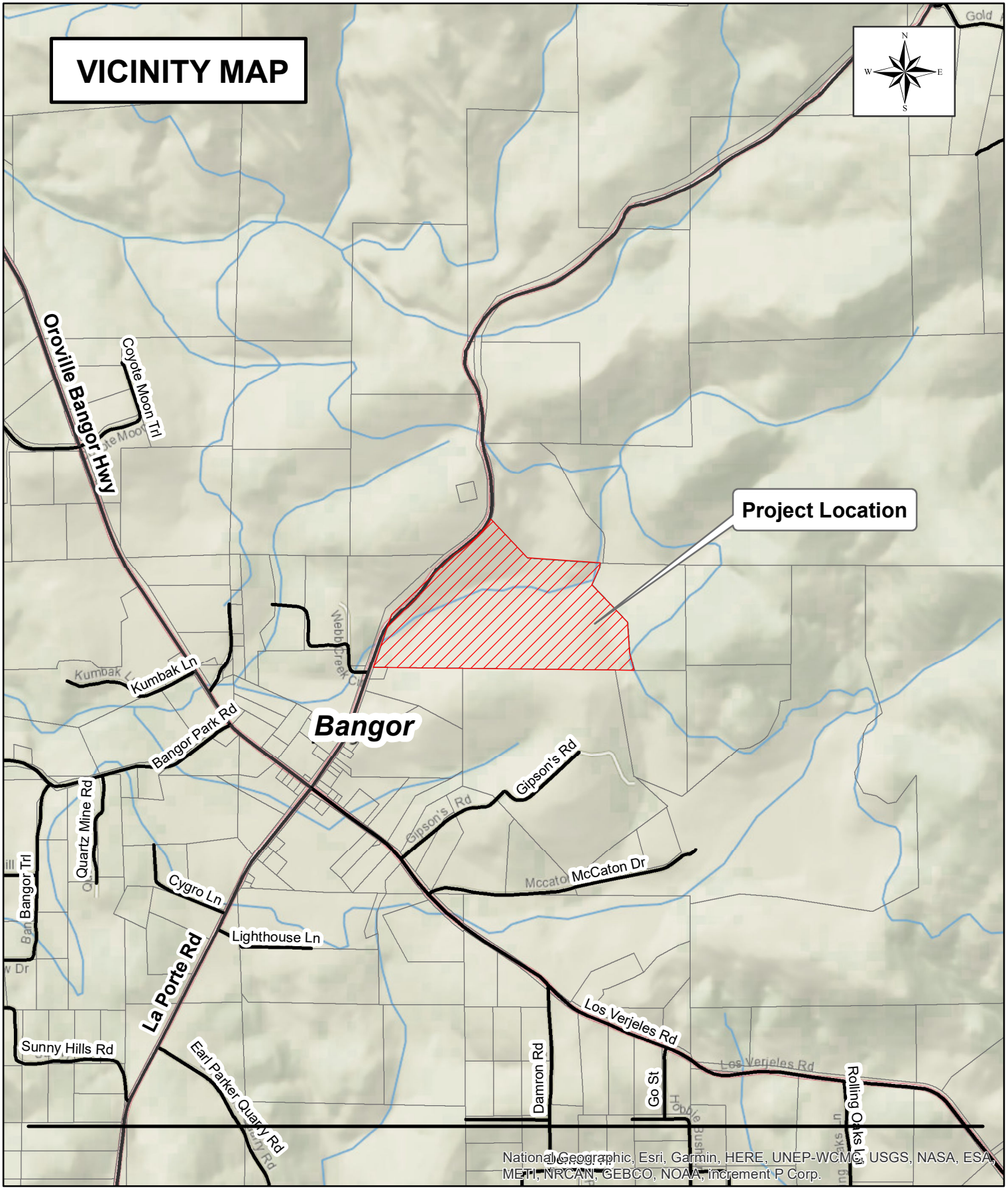
Surrounding parcels are used for agricultural purposes. An existing residence and related buildings associated with the Bangor Ranch Vineyard and Winery abut the site to the south/southwest. The northern portion of the site is developed with an existing residence and outbuildings. The nearest residence is located approximately 350 feet south of the proposed lease area's southern boundary.

Direction	General Plan Designation	Zoning	Existing Land Use(s)
North	Agriculture	AG-20/AG-40	Residential/Agricultural
South	Foothill Residential/Agriculture	FR-5/AG-20	Residential/Winery/Agriculture
East	Agriculture	AG-40	Residential/Agricultural
West	Agriculture	AG-20	Residential/Agricultural

The project would require a connection to the PG&E electrical grid. No municipal services would be required. LaPorte would provide access to the site. It is a two-lane County Road that is approximately 24 feet wide and paved. The lease area would be accessed via an existing access driveway along the eastern property line and a new unpaved extension to the lease area.

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

- Pacific Gas & Electric intertie approval.
- Butte County Encroachment Permit



Legend

- Railroad
- Roads
- Lakes
- Streams

0 550 1,100 2,200 3,300 Feet

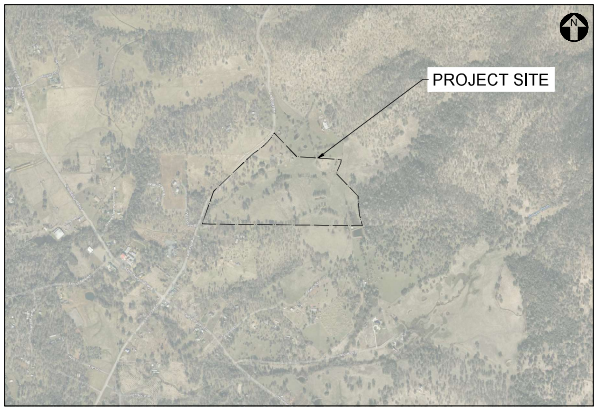
1:18,000

RPCA Solar 11, LLC.

UP23-0005

LA PORTE ROAD SOLAR
LA PORTE ROAD, OROVILLE, CA 95966

AERIAL MAP VIEW



GENERAL PROJECT SCOPE OF WORK

DEVELOP NEW SOLAR PHOTOVOLTAIC + BATTERY ENERGY STORAGE SYSTEM ELECTRICAL GENERATING FACILITIES ON APPROXIMATELY 15.99 ACRES OF LAND. THE SOLAR POWER PLANT WILL BE A SINGLE AXIS TRACKER SYSTEM. THE ENTIRE SITE WILL HAVE MINIMAL EARTHWORK DISTURBANCE AND GRADING OPERATIONS WILL OCCUR MAINLY FOR INSTALLATION OF ACCESS ROADS AND EQUIPMENT PADS. THE SYSTEM WILL BE UL 9540 AND UL 9540a COMPLIANT.

SPECIFIC EQUIPMENT SHOWN IS FOR PLANNING PURPOSES ONLY. FINAL DESIGN AND EQUIPMENT SELECTION WILL BE BASED ON AVAILABILITY AND PRICING OF MATERIALS AT THE TIME OF BUILDING PERMIT SUBMITTAL

PV DC NAMEPLATE: 4,199.04 kW
AC RATING: 3,000.00 kW
BESS RATING: 12,000 kWh

SOLAR MODULE QTY & MODEL:
(7,776) VSUN540-144BMH , 540W

INVERTER QTY & MODEL:
(24) SUNGROW SG125HV, 125KW

BESS MODEL:
(4) CONTAINERS OF (5) POI STACK 750E EACH

BESS INVERTER MODEL AND QTY:
(4) EPC POWER CAB1000/AC-2L.1, 1000kW

OWNER INFORMATION, PROJECT TEAM

OWNER OF RECORD: MCGOWAN ROSS W TRUST, LLC

PROJECT LOCATION: 5864 LA PORTE ROAD (APN #28-240-061)

PROJECT APPLICANT: RPCA SOLAR 11, LLC

PROJECT ENGINEER: SEQUOIA ENGINEERING & DESIGN ASSOCIATES

ZONING DISTRICT: UR-20

GENERAL PLAN DESIGNATION: RMR-20

PARCEL ACREAGE : 79.39 ACRES

PROJECT AREA (INSIDE FENCE) : 15.99 ACRES

CODES & REGULATIONS

WORK PERFORMED AND MATERIALS FURNISHED SHALL CONFORM TO THE APPLICABLE PUBLICATIONS AND STANDARDS OF THE ORGANIZATIONS LISTED BELOW:

NATIONAL
- 2018 INTERNATIONAL BUILDING CODE (IBC)
- NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
- NATIONAL ELECTRIC CODE, 2020 EDITION
- UNDERWRITERS LABORATORIES INV. (UL)
- US DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEATH ACT (OSHA)
- NFPA 704

STATE
- 2019 CALIFORNIA BUILDING CODE
- 2019 CALIFORNIA ELECTRICAL CODE
- 2019 CALIFORNIA ENERGY CODE
- 2019 CALIFORNIA FIRE CODE
- RULE 21 GUIDELINES
- CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ACT (CAL OSHA)

INDEX OF DRAWINGS

NOT FOR CONSTRUCTION, FOR PERMIT REVIEW ONLY.

REVISIONS
9 PRELIM LAYOUT 10/30/23
8 PRELIM LAYOUT 06/20/23

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WWW.SEQUOIA-ENGINEERING.COM

PROJECT
LA PORTE ROAD SOLAR
LA PORTE ROAD,
OROVILLE,
CA 95966,
LAT: 39.392939°
LON: -121.401578°

SHEET TITLE
COVER SHEET

SCALE: AS SHOWN
DRAWN: LR
DATE: 10/30/23

T-001

SHEET 1 OF 7

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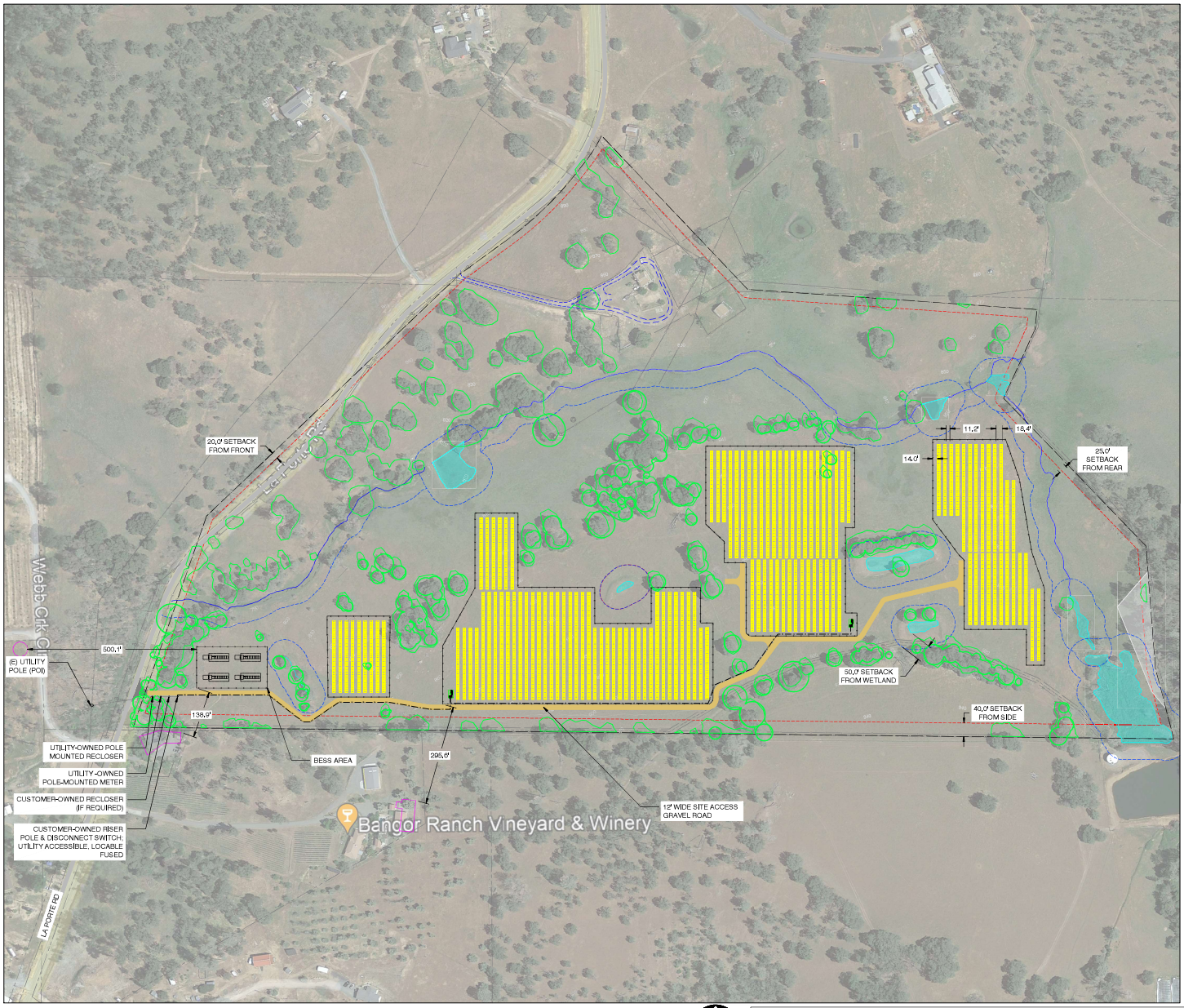

1 ARRAY LOCATION
SCALE:1"=150'

N

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SYSTEM SPECIFICATIONS	
SYSTEM SIZE DC	4,199.04 kW
SYSTEM SIZE AC	3,000.00 kW
DC/AC RATIO	1.40
MODULE MANUFACTURER	VSUN
MODULE MODEL	VSUN540-144BMH
MODULE RATING	540 W
TOTAL MODULE QTY	7,776
MODULES PER STRING	27
TOTAL NO. OF STRINGS	288
INVERTER MODEL	SUNGROW SG125HV
INVERTER RATING	125 kW
INVERTER QTY	24
STEP-UP TRANSFORMER	12kV/600V, 3000kVA
RACKING	ATI HSAT
# OF 81 MODULE RACKS	50
# OF 54 MODULE RACKS	69
TILT ANGLE	0°
INTER-ROW SPACING	11.2'
PITCH	18.4'
GCR	39.13%
SITE AREA INSIDE FENCE	15.99 Ac
BESS DETAILS	
BESS DETAILS	3,000.00 kW
POI BESS CAPACITY	12,000 kWh
INVERTER MODEL	EPC POWER CAB1000/AC - 2L.1
TOTAL INVERTER QTY	2
# OF BESS CONTAINERS	4
* MAX SYSTEM OUTPUT @POI IS LIMITED TO 3MW.	

LEGEND

- ATI 81 MODULE TRACKER ROW
- ATI 54 MODULE TRACKER ROW
- POWER STATION - (1) MV TRANSFORMER, (1) DAS, (1) WEATHER STATION
- 14' GRAVEL ACCESS ROAD
- SEASONAL WETLANDS
- STREAM
- TREES CANOPY
- (E) PUBLIC ROAD
- PROPERTY LINE
- PROJECT SITE SECURITY FENCE
- SETBACK
- (E) OH LINES
- OVERHEAD MV CABLE
- MV CABLE
- EXISTING STRUCTURES

GENERAL NOTES

1. REFER TO SINGLE LINE DIAGRAM FOR DETAILS.
2. INSTALLATION TO COMPLY WITH NEC 2023 ARTICLE 690 AND ALL APPLICABLE LOCAL, STATE AND NATIONAL CODES OR REGULATIONS.
3. EQUIPMENT SHALL BE LABELED PER NEC 690 AND UTILITY REGULATIONS.
4. 12' ACCESS ROADS SHALL BE DESIGNED TO ACCOMMODATE ALL CONSTRUCTION, OPERATIONS, MAINTENANCE, AND UTILITY TRAFFIC THROUGHOUT THE SITE.
5. DIMENSIONS TO PROPERTY LINES AND EXISTING FEATURES ARE APPROXIMATE PENDING SURVEY.

REVISIONS

9	PRELIM LAYOUT	10/30/23
8	PRELIM LAYOUT	06/20/23

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SHEET TITLE

SITE PLAN

SCALE: AS SHOWN
DRAWN: LR
DATE: 10/30/23

PV-100

SHEET 2 OF 7

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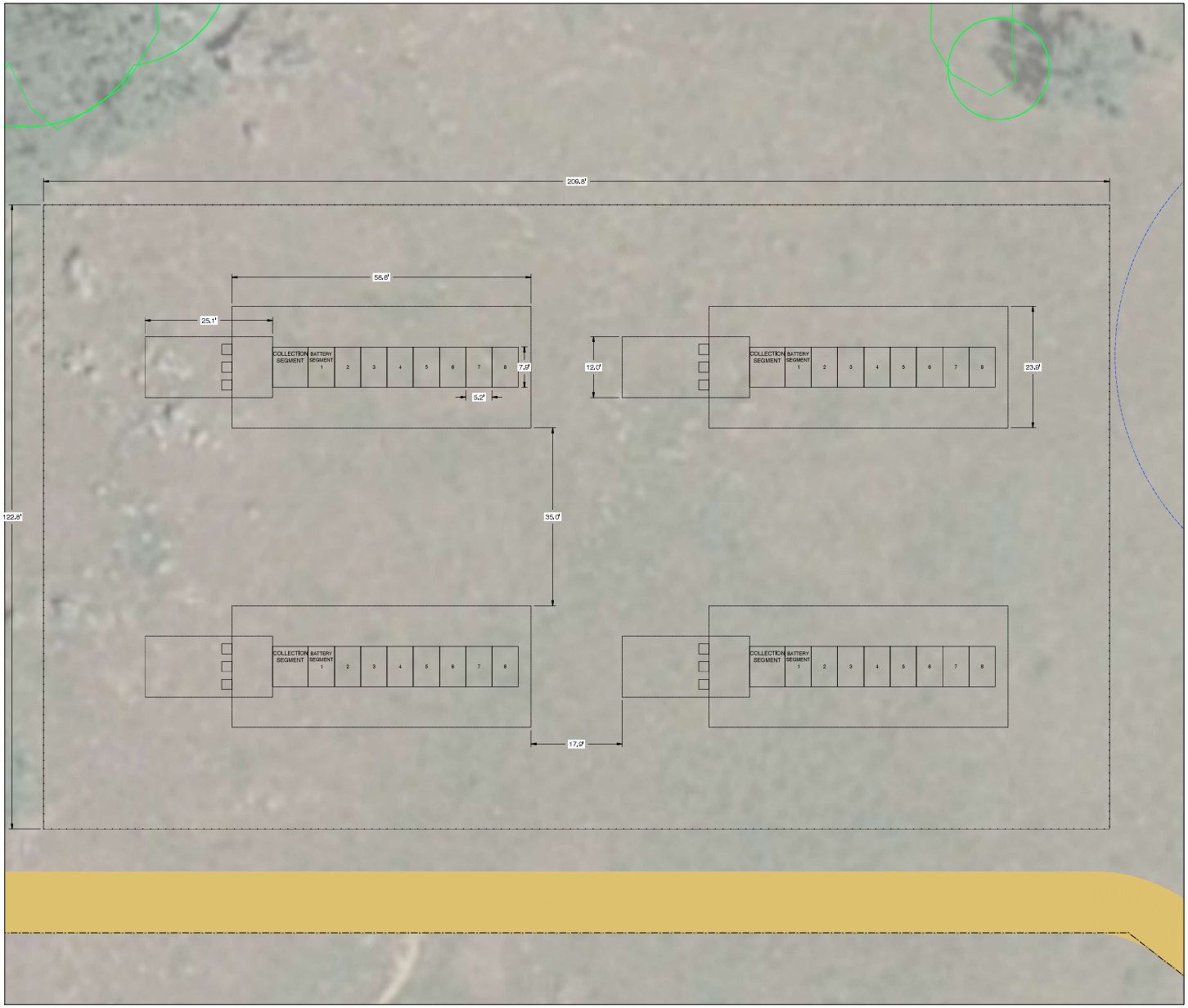

1 BESS CONTAINER
SCALE:1"=150'

LEGEND

- BESS PAD - (1) BESS INVERTER, (5) POWIN CENTIPEDE 750E STACKS
- 14' GRAVEL ACCESS ROAD
- TREES CANOPY
- STREAM
- PROJECT SITE SECURITY FENCE
- SETBACK
- MV CABLE

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SHEET TITLE

BESS CONTAINER

SCALE: AS SHOWN
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DATE: 10/30/23

PV-101

SHEET 3 OF 7

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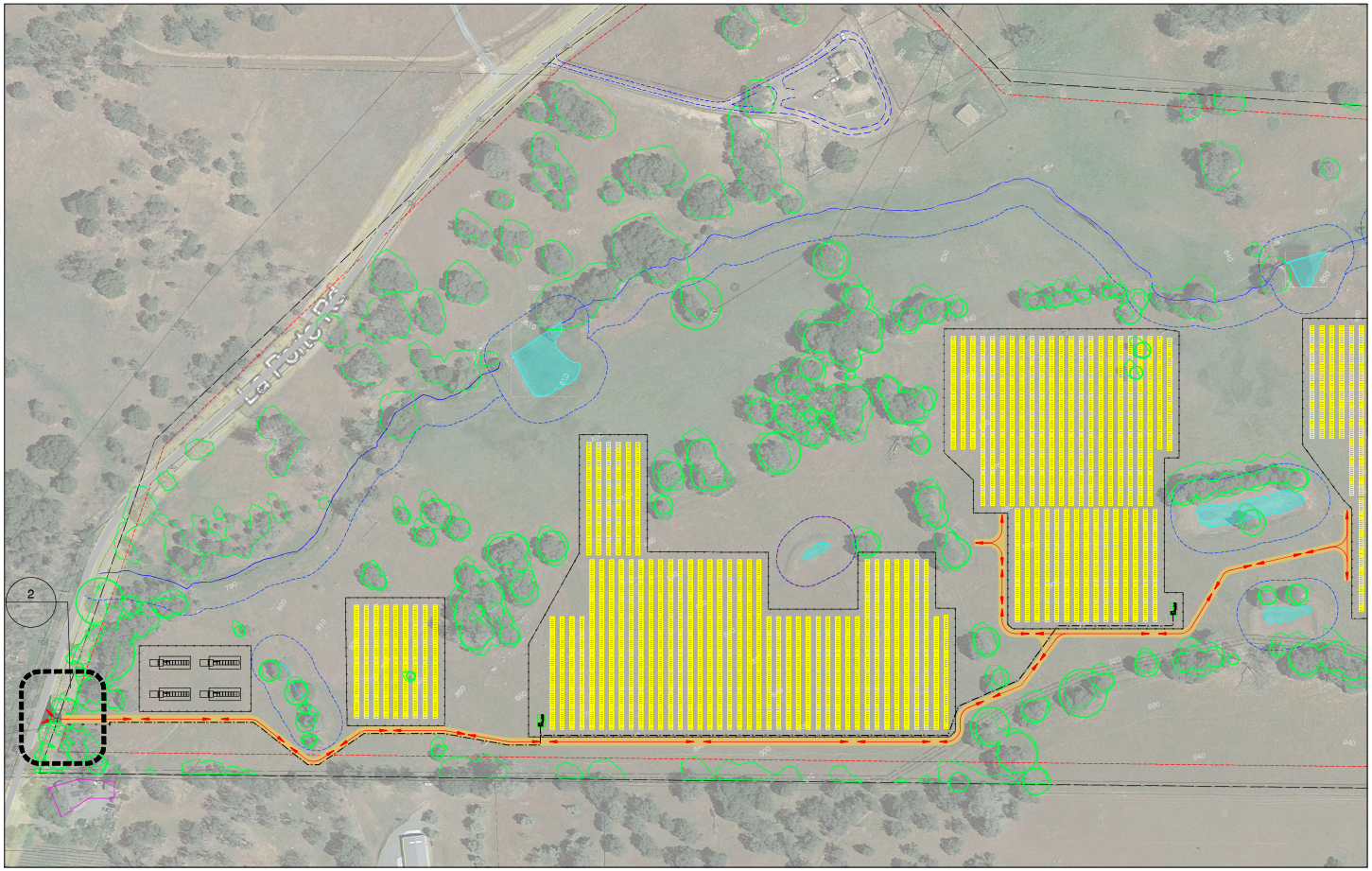
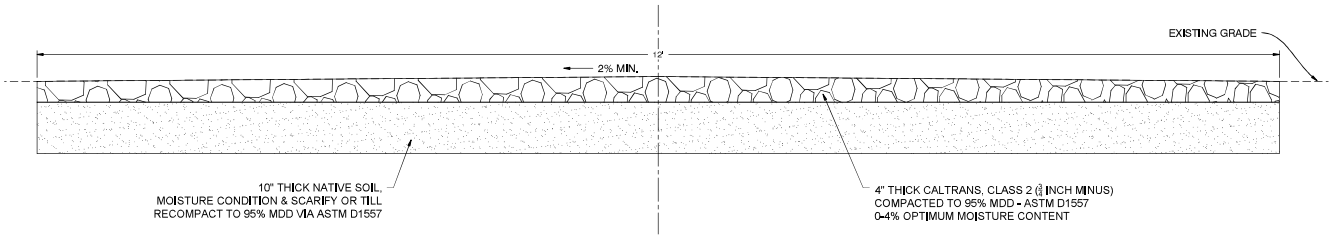


2 SITE ACCESS ROAD
SCALE:1"=20'

1 ACCESS ROAD
SCALE:1"=110'



3 SITE ACCESS ROAD SECTION, TYP.
SCALE: N.T.S.

LEGEND

- ATI 81 MODULE TRACKER ROW
- ATI 54 MODULE TRACKER ROW
- POWER STATION - (1) MV TRANSFORMER, (1) DAS, (1) WEATHER STATION
- 14' GRAVEL ACCESS ROAD
- SEASONAL WETLANDS
- STREAM
- TREES CANOPY
- (E) PUBLIC ROAD
- PROPERTY LINE
- PROJECT SITE SECURITY FENCE
- SETBACK
- (E) OH LINES
- OVERHEAD MV CABLE
- MV CABLE
- EXISTING STRUCTURES

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LA PORTE ROAD,
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SHEET TITLE

ACCESS ROAD

SCALE: AS SHOWN
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PV-102

SHEET 4 OF 7

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1 SOLAR ARRAY
SCALE:1"=150'

LEGEND

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- ATI 54 MODULE TRACKER ROW
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- 14' GRAVEL ACCESS ROAD
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2 SITE ACCESS ROAD
SCALE:1"=20'

N

REVISIONS

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LA PORTE ROAD SOLAR
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LAT: 39.392939°
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SHEET TITLE

SOLAR ARRAY

SCALE: AS SHOWN
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PV-103

SHEET 5 OF 7

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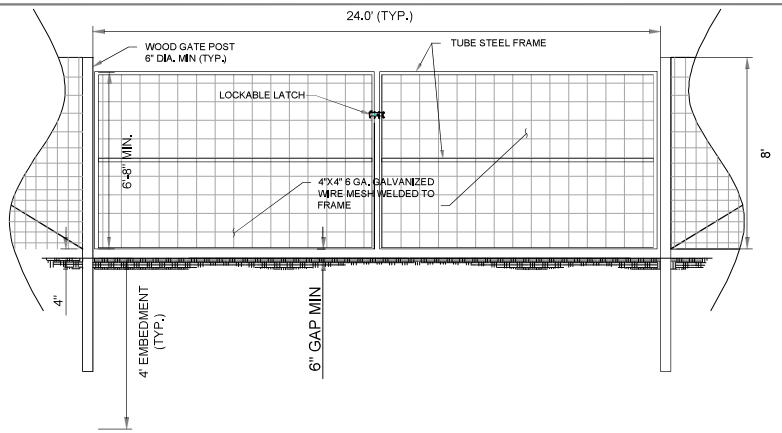


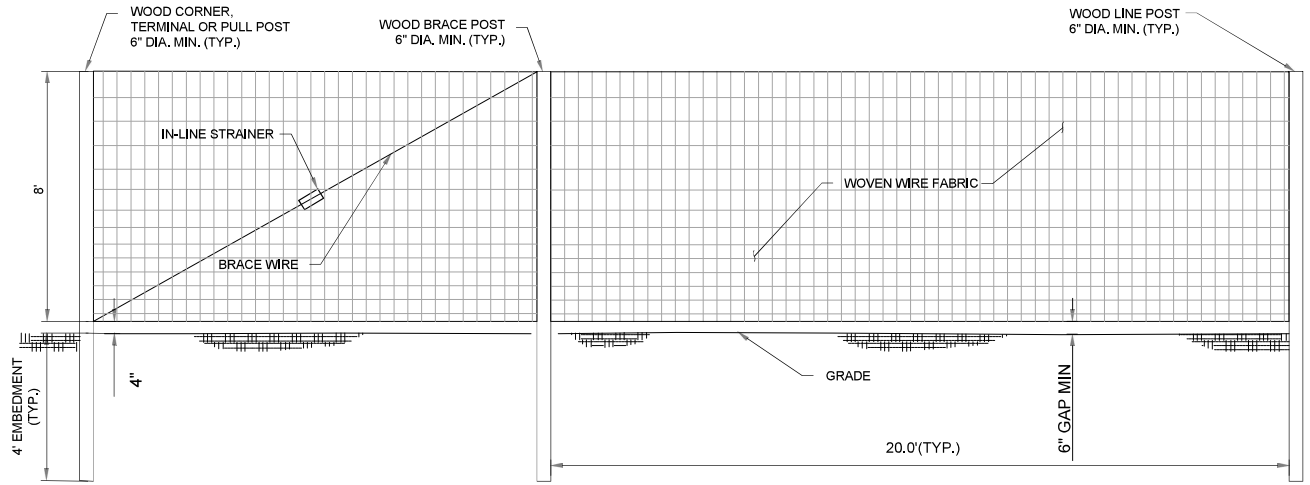
NOTE:

1. FENCING SUPPLIER SHALL PROVIDE FINAL AND SEALED FENCING DRAWINGS WITH MATERIAL AND SPECIFICATION REQUIREMENTS.
2. A KNOX PAD LOCK WILL BE PLACED ON CHAINED GATE OR KNOX BOX WITH GATE ACCESS KEYS WILL BE MOUNTED AT THE MAIN ENTRANCE FOR FIRE DEPARTMENT ACCESS.

1 ACCESS GATE DETAILS
SCALE:NTS

FENCE INSTALLATION NOTES:

1. FENCE TO BE INSTALLED IN GENERAL ACCORDANCE WITH ASTM F567. LOCAL FENCE CONTRACTOR TO ALTER ASTM F567 REQUIREMENTS TO MEET SITE SPECIFIC CONDITIONS.
2. FENCE FABRIC SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A392, CLASS 2.
3. STRENGTH AND PROTECTIVE COATINGS OF ALL FENCE FRAMEWORK SHALL CONFORM TO ASTM F1083.
4. EXTENDED, END, OR PULL POST FOOTING MINIMUM CONCRETE COMPRESSIVE STRENGTH SHALL BE 2,500 PSI MIN.
5. EXTENDED, END, OR PULL POST MINIMUM FOOTING DIAMETER SHALL BE FOUR TIMES THE LARGEST CROSS SECTION OF THE POST FOR POST DIAMETER UP TO 4".
6. EXTENDED, END, OR PULL POST FOOTING DEPTH SHALL BE A MINIMUM OF 24" PLUS AN ADDITIONAL 3" DEPTH FOR EACH 1' POST HEIGHT INCREASE ABOVE 4' POST HEIGHT ABOVE GROUND.
7. SWING GATE POST FOOTING DEPTHS AND DIAMETERS SHALL BE DETERMINED BASED ON ASTM F567, TABLE 2 AND ALTERED AS NEEDED BY FENCE CONTRACTOR.
8. IN AREAS WHERE EXISTING FENCES CONFLICT WITH SITE SECURITY FENCE, CONTRACTOR SHALL REMOVE AND DISPOSE OF EXISTING FENCE.
9. POSTS SHALL BE STEEL PIPE, ASTM F1083 STANDARD WEIGHT SCHEDULE 40.
10. LINE POSTS - 2" SCHEDULE 40.
11. TERMINAL POSTS (EXTENDED, END, AND PULL) 21/2" SCHEDULE 40.
12. ALL STEEL OR MALLEABLE IRON PARTS AND ACCESSORIES SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123 AFTER FABRICATION.
13. WARNING SIGNS TO BE INSTALLED AT 100' INTERVALS, CONTENTS DECIDED BY OWNER.



NOTE:

1. FENCING SUPPLIER SHALL PROVIDE FINAL AND SEALED FENCING DRAWINGS WITH MATERIAL AND SPECIFICATION REQUIREMENTS.
2. A KNOX PAD LOCK WILL BE PLACED ON CHAINED GATE OR KNOX BOX WITH GATE ACCESS KEYS WILL BE MOUNTED AT THE MAIN ENTRANCE FOR FIRE DEPARTMENT ACCESS.

2 FENCE DETAILS
SCALE:NTS

REVISIONS

9	PRELIM LAYOUT	10/30/23
8	PRELIM LAYOUT	06/20/23

RENEWABLE PROPERTIES
879 SANCHEZ STREET,
SAN FRANCISCO, CA 94114
PHONE (630) 518-7669
WWW.RENEWPROP.COM

SEDA
SEQUOIA ENGINEERING & DESIGN ASSOCIATES
575 LENNON LANE SUITE 145
WALNUT CREEK, CA 94598
PHONE (925) 891-4183
FAX (925) 954-1220
WWW.SEQUOIA-ENGINEERING.COM

PROJECT

LA PORTE ROAD SOLAR
LA PORTE ROAD,
OROVILLE,
CA 95966,
LAT: 39.392939°
LON: -121.401578°

SHEET TITLE

FENCING AND GATE

SCALE: AS SHOWN
DRAWN: LR
DATE: 10/30/23

PV-104

SHEET 6 OF 7

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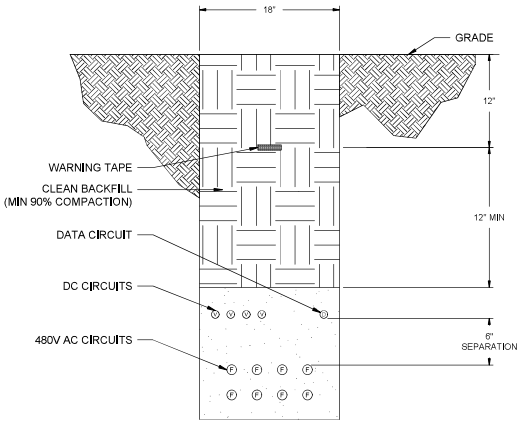
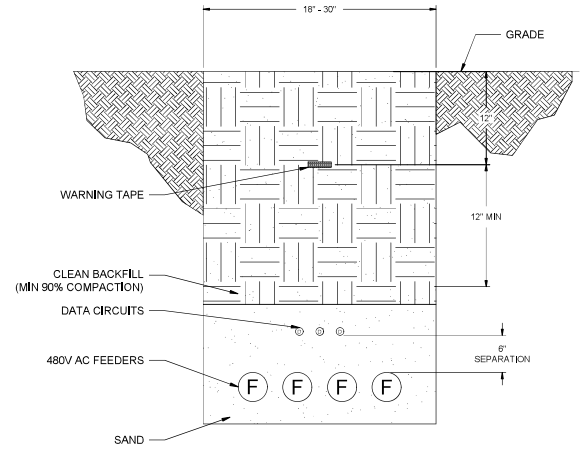
TRENCH NOTES

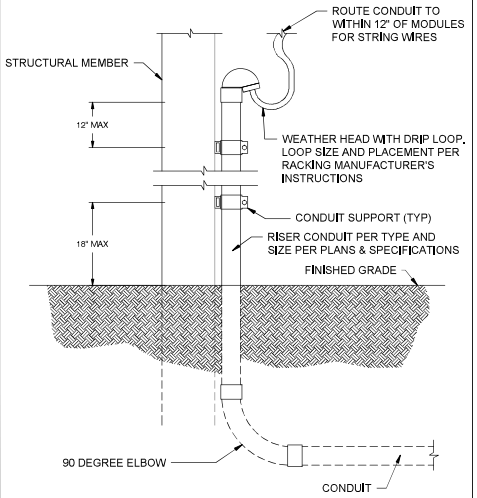
1. PROVIDE 3" CLEARANCE FROM SIDES AND BOTTOM OF TRENCH TO ANY CONDUIT OR CABLE.
2. PLACE 6" MINIMUM SAND COVER OVER CONDUIT AND CABLES. PLACE 3" MINIMUM SAND ON BOTTOM AND SIDES OF CABLES.
3. WITH CONDUIT AND CABLES IN PLACE, COMPACT TO 90% USING NO MECHANICAL EQUIPMENT. COMPACT 12" OF TRENCH TO 95% IN PAVEMENT AREAS.
4. USE NATIVE SOIL BACKFILL, LOWER 10-12" IS SAND
5. MAINTAIN MIN 36" CLEARANCE WHEN PARALLELING STRUCTURAL SUPPORTS. IN NO CASE SHALL CLEARANCE BE LESS THAN 5 TIMES DIAMETER OF DRIVEN PILES.
6. SURFACE ACTIVITIES AND LOADING OVER BURIED CABLES SHALL NOT EXCEED RATED CRUSH CAPACITY OF CABLES OR CONDUITS.
7. MAINTAIN MINIMUM 4" VERTICAL CLEARANCE WHERE DC CIRCUITS CROSS OR PARALLEL DC & AC CIRCUITS FROM OTHER LOW VOLTAGE SYSTEMS.
8. MAINTAIN MINIMUM 12" CLEARANCE BETWEEN ALL UNDERGROUND UTILITIES AND MEDIUM VOLTAGE CIRCUITS. VERIFY EXACT REQUIREMENTS WITH UTILITY BEFORE STARTING UNDERGROUND INSTALLATION.
9. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (DIAL 811) TWO FULL BUSINESS DAYS IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES, INCLUDING PAVEMENT REMOVAL, EXCAVATION AND AC OVERLAY, WHICH COULD AFFECT ANY UNDERGROUND UTILITY.
10. MAINTAIN MINIMUM 6" OF SEPARATION BETWEEN DIFFERENT VOLTAGE CLASSES & MIN 3" SEPARATION BETWEEN CONDUITS, GROUND RODS AND UNDERGROUND OBSTRUCTIONS.



1 AC FEEDER TRENCH WITH DC SOURCE CIRCUIT & DATA
SCALE:NTS

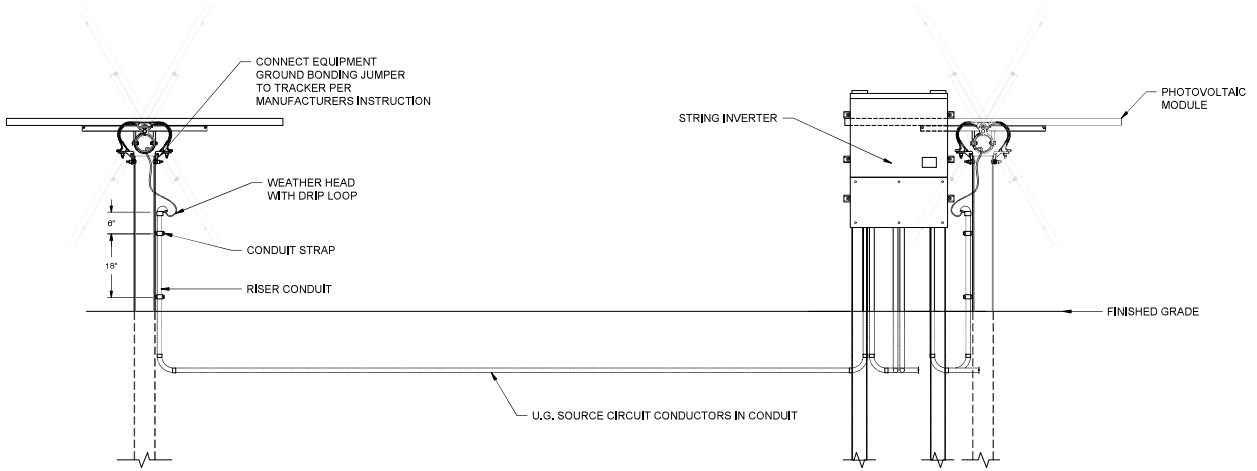


2 AC FEEDER TRENCH
SCALE:NTS



NOTES:
1. DIMENSION BETWEEN RISER CONDUIT AND RACKING STRUCTURAL MEMBER TBD BY CONTRACTOR IN FIELD. USE CODE APPROVED MEANS AND METHODS.
2. USE APPROVED CONDUIT FOR EXPOSED AREA PER NEC 352-10 (f) & NEC 352-12 (c).

3 RISER CONDUIT DETAIL
SCALE:NTS



4 DC SOURCE CIRCUIT (JUMPER) TRENCH DETAIL
SCALE:NTS

NOT FOR CONSTRUCTION.

REVISIONS
9 PRELIM LAYOUT 10/30/23
8 PRELIM LAYOUT 06/20/23

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879 SANCHEZ STREET,
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PROJECT
LA PORTE ROAD SOLAR
LA PORTE ROAD,
OROVILLE,
CA 95966,
LAT: 39.392939°
LON: -121.401578°

SHEET TITLE
MV TRENCH

SCALE: AS SHOWN
DRAWN: LR
DATE: 10/30/23

PV-105

SHEET 7 OF 7

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VSUN
Innovative & Smart

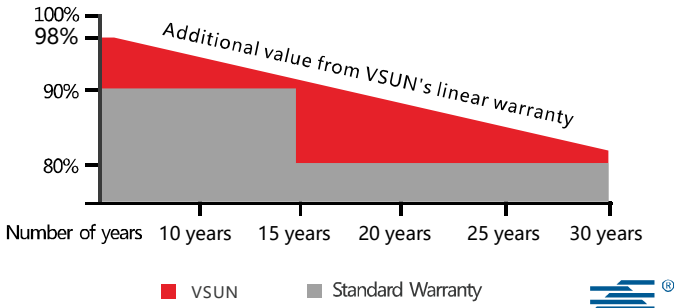
VSUN550-144BMH

550W
Highest power output

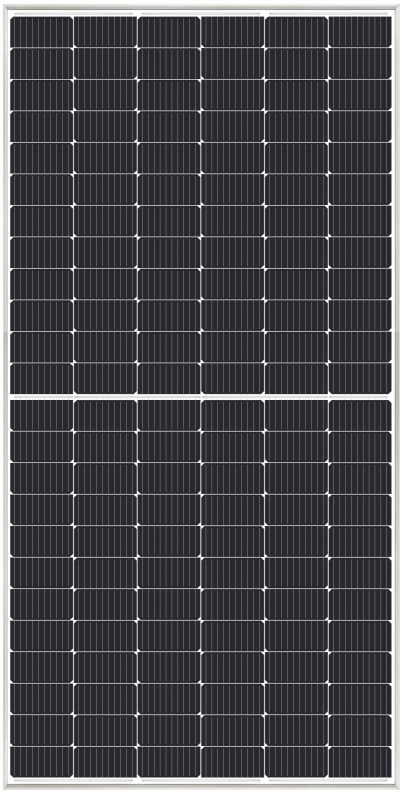
21.29%
Module efficiency

12years
Material & Workmanship warranty

30years
Linear power output warranty



VSUN550-144BMH VSUN545-144BMH
VSUN540-144BMH VSUN535-144BMH



- MBB technology with Circular Ribbon
- Higher output power
- Half-cell Technology
- Positive tolerance offer
- Micro Gap
- Up to 30% extra power generation yield from the back side
- Certified for salt/ammonia corrosion resistance
- Load certificates: wind to 2400Pa and snow to 5400Pa
- Lower LCOE

VSUN, a BNEF Tier-1 PV module manufacturer invested by Fuji Solar, has been committed to providing greener, cleaner and more intelligent renewable energy solutions. VSUN is dedicated to bringing reliable, customized and high-efficient products into various markets and customers worldwide

Engineered in Japan
www.vsun-solar.com

Electrical Characteristics at Standard Test Conditions(STC)

Module Type	VSUN550-144BMH	VSUN545-144BMH	VSUN540-144BMH	VSUN535-144BMH
Maximum Power - Pmax (W)	550	545	540	535
Open Circuit Voltage - Voc (V)	49.92	49.81	49.65	49.5
Short Circuit Current - Isc (A)	13.99	13.92	13.85	13.78
Maximum Power Voltage - Vmpp (V)	42	41.8	41.65	41.5
Maximum Power Current - Impp (A)	13.1	13.04	12.97	12.9
Module Efficiency	21.29%	21.10%	20.90%	20.71%

Standard Test Conditions (STC): irradiance 1,000 W/m²; AM 1,5; module temperature 25°C. Pmax Sorting : 0~5W. Measuring Tolerance: ±3%.

Remark: Electrical data do not refer to a single module and they are not part of the offer. They only serve for comparison among different module types.

Electrical Characteristics with different rear side power gain(reference to 545 front)

Pmax (W)	Voc (V)	Isc (A)	Vmpp (V)	Impp (A)	Pmax gain
575	49.76	14.69	41.80	13.76	5%
602	49.76	15.39	41.80	14.41	10%
656	49.81	16.79	41.75	15.72	20%
684	49.81	17.49	41.75	16.38	25%

Temperature Characteristics

NOCT	45°C(±2°C)
Voltage Temperature Coefficient	-0.27%/°C
Current Temperature Coefficient	+0.048%/°C
Power Temperature Coefficient	-0.32%/°C

Maximum Ratings

Maximum System Voltage [V]	1500
Series Fuse Rating [A]	30
Bifaciality	70%±10%

Material Characteristics

Dimensions	2278×1134×35mm (L×W×H)
Weight	28.8kg
Frame	Silver anodized aluminum profile
Front Glass	AR-Coating toughened glass, 3.2 mm
Cell Encapsulation	EVA or POE
Back Sheet	Transparent or white mesh transparent backsheet
Cells	12×12 pieces bifacial monocrystalline solar cells series strings
Junction Box	IP68, 3 diodes
Cable&Connector	Potrait: 500 mm (cable length can be customized) , 1×4 mm 2 , compatible with MC4

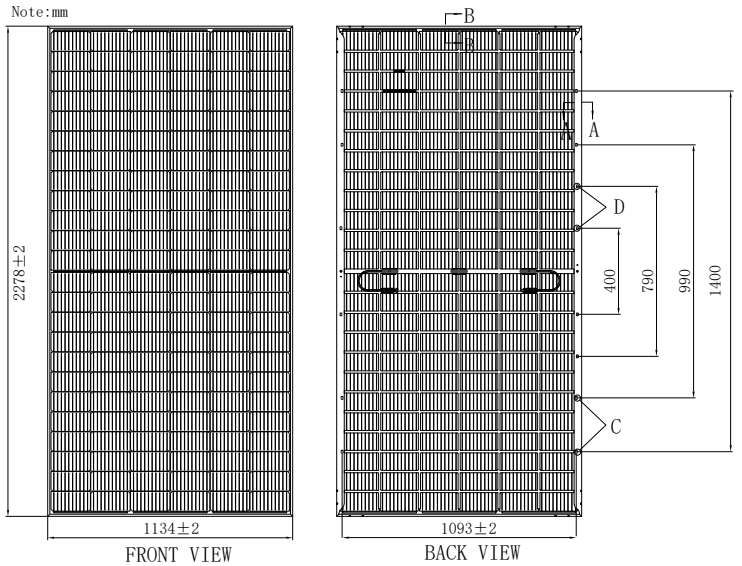
Packaging

Dimensions(L×W×H)	2310×1125×1253mm
Container 20'	155
Container 40'	310
Container 40'HC	620 PCS, 31PCS/Pallet

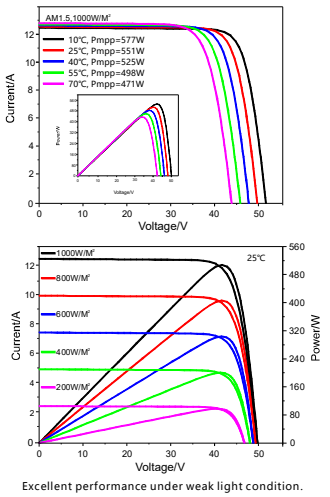
System Design

Temperature Range	-40 °C to + 85 °C
Withstanding Hail	Maximum diameter of 25 mm with impact speed of 23 m/s
Maximum Surface Load	5,400 Pa
Application class	class A

Dimensions



IV-Curves



Excellent performance under weak light condition.

Revision date: 2022-08-01

SUNGROW

SG125HV

String Inverter for 1500 Vdc System

High Yield

- Patent five-level topology, max. efficiency 98.9 %, European efficiency 98.7 %, CEC efficiency 98.5 %
- Full power operation without derating at 50 ℃

Easy O&M

- Virtual central solution, easy for O&M
- Compact design and light weight for easy installation

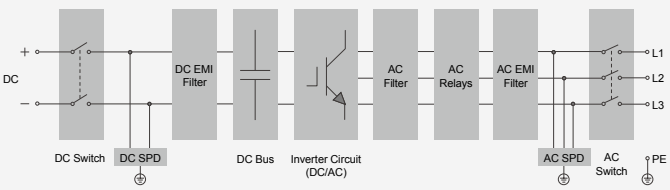
Saved Investment

- DC 1500 V, AC 600 V, low system initial investment
- 1 to 5 MW power block design for lower MV transformer and labor cost
- Max. DC/AC ratio up to 1.5

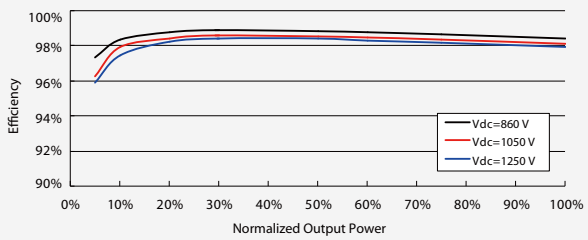
Grid Support

- Compliance with both IEC and UL safety, EMC and grid support regulations
- Low/High voltage ride through (L/HVRT)
- Active & reactive power control and power ramp rate control

Circuit Diagram



Efficiency Curve



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Subject to change without notice. Version 1.0

Input (DC)	SG125HV
Max. PV input voltage	1500 V
Min. PV input voltage / Startup input voltage	860 V / 920 V
Nominal input voltage	1050 V
MPP voltage range	860 – 1450 V
MPP voltage range for nominal power	860 – 1250 V
No. of independent MPP inputs	1
No. of DC inputs	1
Max. PV input current	148 A
Max. DC short-circuit current	240 A

Output (AC)	
AC output power	125000 VA @ 50 ℃
Max. AC output current	120 A
Nominal AC voltage	3 / PE, 600 V
AC voltage range	480 – 690 V
Nominal grid frequency / Grid frequency range	50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz
THD	< 3 % (at nominal power)
DC current injection	< 0.5 % In
Power factor at nominal power / Adjustable power factor	> 0.99 / 0.8 leading – 0.8 lagging
Feed-in phases / Connection phases	3 / 3

Efficiency	
Max. efficiency / Euro. efficiency / CEC effciency	98.9 % / 98.7 % / 98.5 %

Protection	
DC reverse connection protection	Yes
AC short-circuit protection	Yes
Leakage current protection	Yes
Grid monitoring	Yes
DC switch / AC switch	Yes / Yes
Overvoltage protection	DC Type II / AC Type II

General Data	
Dimensions (W*H*D)	670*902*296 mm 26.4''*35.5''*11.7''
Weight	76 kg 167.5 lb
Isolation method	Transformerless
Degree of protection	IP 65 NEMA 4X
Night power consumption	< 4 W
Operating ambient temperature range	-25 to 60 ℃ (> 50 ℃ derating) -13 to 140 ℉ (> 122 ℉ derating)
Allowable relative humidity range (non-condensing)	0 – 100 %
Cooling method	Smart forced air cooling
Max. operating altitude	4000 m (> 3000 m derating) 13123 ft (> 9843 ft derating)
Display / Communication	LED, Bluetooth+APP / RS485
DC connection type	OT or DT terminal (Max. 185 mm² 350 Kcmil)
AC connection type	OT or DT terminal (Max. 185 mm² 350 Kcmil)
Compliance	CE, IEC 62109-1/-2, IEC 61000-6-2/-4, IEC 61727, IEC 62116, IEC 61000-3-11/-12, UL 1741, UL 1741 SA, IEEE 1547, IEEE 1547.1, CSA C22.2 107.1-01 and California Rule 21
Grid support	LVRT, HVRT, active & reactive power control and power ramp rate control
Type designation	SG125HV-10

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POWIN

PRODUCT: Stack750 PLATFORM: Centipede

Centipede is Powin's modular battery energy storage platform, purpose-built for the most grueling environments and use cases. Designed to dramatically increase site energy density, decrease installation times and simplify capacity augmentation, Centipede is ready to perform a diverse set of market applications including Frequency Response/Regulation, T&D Deferral, Flexible Peaking Capacity, Renewable Integration and more.

Modular, Scalable and Configurable

Centipede's modular design allows you to easily scale up your project size from a single standalone unit to gigawatt-hours per project site. Centipede utilizes Powin's field-proven Stack hardware and StackOS software platform to ensure continuity and familiarity between Powin's product lines to perform a variety of simple and advanced market applications.

Enhanced Safety and Quality

Centipede combines Powin's safest-in-class LFP Stack hardware and integrated enclosures into one standardized, factory-built, outdoor product to ensure maximum quality control. Each Centipede unit includes a comprehensive package of explosion prevention and fire safety features, such as hydrogen detection and active ventilation, fire detection, fireproof insulation, and optional clean agent fire suppression.

End to End Cost Savings

Centipede's factory-built and tested design allows for units to be installed on site in a fraction of the time it takes for traditional enclosure-based systems to be installed. The increased energy density also reduces the amount of land that is required to install a system per MWh. The highly serviceable design includes field-swappable, redundant components that minimizes downtime and service costs. These advantages, paired with Powin's diverse supply chain and Tier 1 cell procurement strategy give Powin's customers continual cost advantages upfront and over the lifespan of a system.

POWIN STACK750E TECHNICAL SPECIFICATIONS

		STACK750		
Electrical	DC Voltage	1,210 - 1,491 V		
	Duration	2+ hrs		
	Maximum Energy Capacity[1]	750 kWh DC per segment & 250 MWh AC per acre		
	Rated Duration of Discharge	2 hrs	3 hrs	4 hrs
	DC Power @ Rated Duration	369.5 kW	247.5 kW	186.5 kW
	DC Energy Capacity @ Rated Duration[2]	733.5 kWh	736.9 kWh	740.4 kWh
	Aux Load (Standby/Peak)[3]	0.25 kW / 5.6 kW	0.24 kW / 5.5 kW	0.23 kW / 5.4 kW
	Daily Aux Energy Use[3,4,5]	29 - 31 kWh	21 - 23 kWh	17 - 19 kWh
	Auxiliary Power Input	3-Phase 480V AC / 60 Hz or 400V AC / 50 Hz		
Performance & Safety	DC Round Trip Efficiency	93%	94%	95%
	Cycle Life[5,6]	7,300 cycles		
	Calendar Life[6]	20 years		
	Cell Manufacturers	Powin Tier 1		
	Cell Chemistry	Lithium Iron Phosphate (LFP)		
	Depth of Discharge	100%		
	Explosion Prevention & Mitigation	Off-gas detection with dedicated, fail-safe active & passive ventilation systems		
	Fire Suppression	Addressable fire panel, smoke & heat detectors, heat activated sprinkler system with remote FDC dry standpipe connection, fire rated insulation, strobes, and horn; optional clean agent fire suppression		
	Heating & Cooling[7]	Redundant, field-swappable, high efficiency HVAC with humidity control		
	Codes & Compliance	UL 9540A, UL 1973, UL 9540, NFPA 1, NFPA 69, NFPA 855, IFC, IEC 62619, IEC 6100-6-2, IEC 62477, UN 3480, UN 38.3, UL 1642		
Mechanical	Weight (Approximate)	20,000 lbs. (9,074 kg)		
	Battery Segment Dimensions	8'1" D × 5'2" L × 10'8" H (2,443 mm × 1,572 mm × 3,282 mm)		
	Enclosure Type / Rating[8]	NEMA 3R/IP55 standard; NEMA 3RX available		
	Ambient Operating Temperature Range[9]	-30°C to +50°C		
Software	BMS + EMS + Solar + Environmental Controls	StackOS™		
	Analytics + Optimization + Data Warehouse	StackOS+™		
	First Responder HMI	Powin for First Responders™		
	Communications Interface	Modbus TCP (MESA/Sunspec) & REST API		

Note: Specifications in the above table are design estimates only and are not guaranteed. Contact Powin for a project-specific estimate as final values depend on system design, location, and use case.

1 Per acre energy capacity represents fully installed AC BESS, including inverters, transformers, and auxilaries; excludes augmentation

2 Energy capacity is recorded at the DC bus and assumes near-symmetric cycle; capacity will be ~1-2% lower for symmetric cycle use case

3 Assumes 1 full cycle per day at rated power in a temperate climate; active cell balancing contribution de minimis

4 Assumes 1 full cycle per day and includes calendar aging for the day

5 Includes Stack level thermal management and controls

6 End of life depends both on BESS age and usage; actual lifetime may be less than 20 years for high cycle use cases

7 Degree of HVAC redundancy (partial or full) depends on location and use case

8 IP rating applicable only for the compartments containing batteries and electronics

9 StackOS may automatically derate power at high/low ambient temperatures or after extended operation to mantain proper cell temperatures

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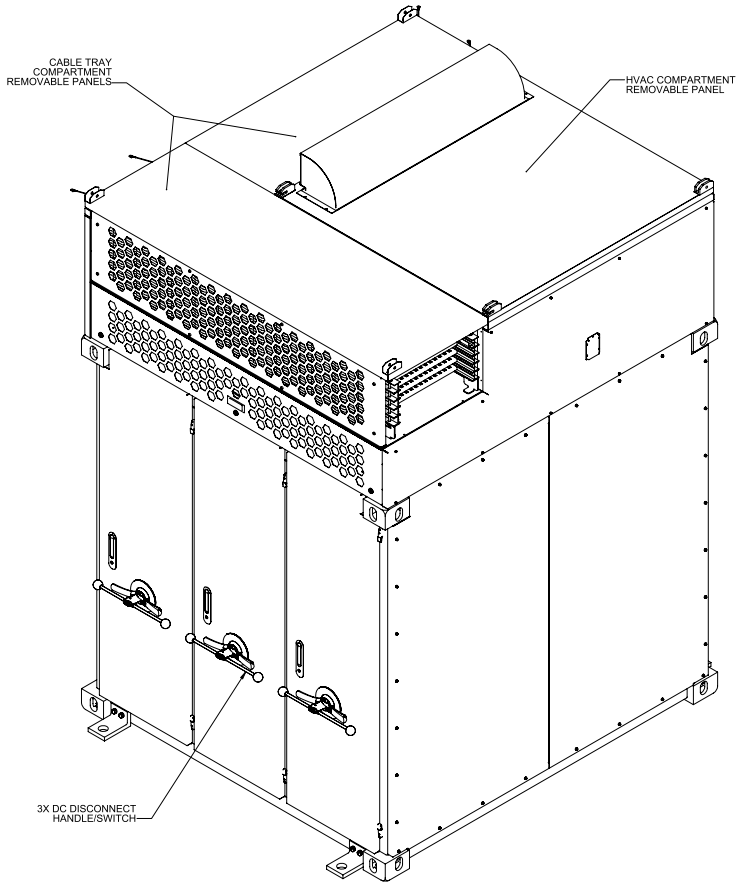
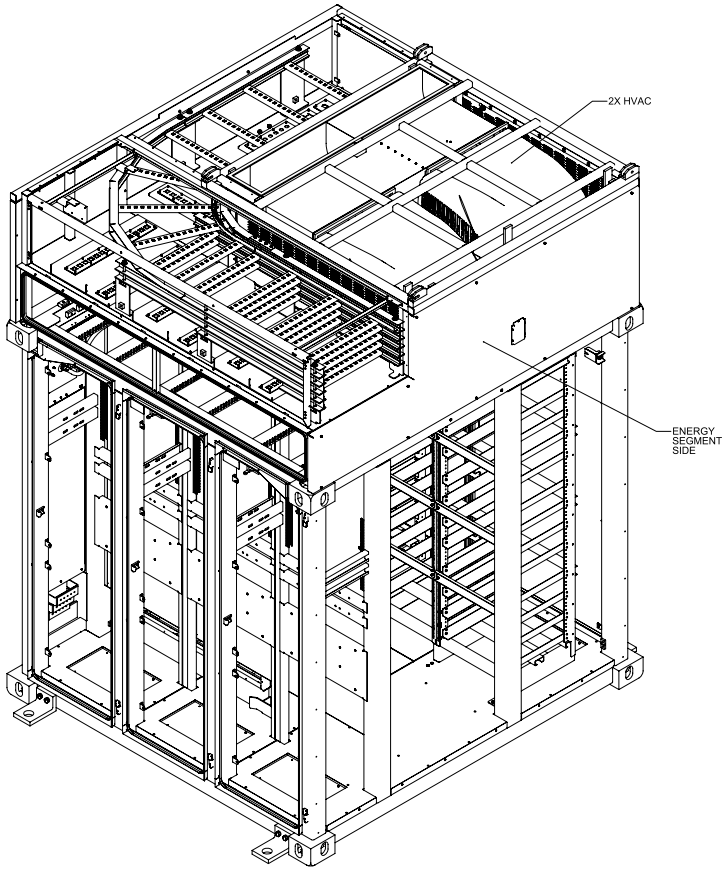
REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	1.0	INITIAL RELEASE	2022-08-19	MR



ISOMETRIC VIEW
EXTERNAL DETAIL
FOR REFERENCE ONLY
SCALE: NONE



ISOMETRIC VIEW
INTERNAL DETAIL
FOR REFERENCE ONLY
SCALE: NONE

SHEET NOTES:

1. COLLECTION SEGMENT APPROXIMATE WEIGHT: 11,000 LBS
2. CABLE TRAY SHIPPED SEPARATELY AND INSTALLED BY OTHERS.
3. SOME ITEMS REMOVED FOR CLARITY.
4. SEGMENTS SHALL BE INSTALLED COPLANAR TO ADJACENT SEGMENTS TO WITHIN ± 3.0MM.
5. SHIM UNEVEN SURFACES, COPLANARITY ALLOWANCE SHALL BE ± 1.5MM. UNEVEN SURFACES MAY BE FILLED WITH SHIMS.
6. INSTALLATION PLANE DRAINAGE GRADE SHALL NOT EXCEED 1°.

PROJECT: N/A | MODEL: N/A

UNLESS OTHERWISE SPECIFIED:
INTERPRET DRAWING PER ASME Y14.5-2009 AND Y14.100

	NAME	DATE
DRAWN	J. CONSER	2022-03-21
CHECKED	M. FRENCH	2022-08-09
MECH ENG APPR.	M. ROTUNDO	2022-08-19
PROJ ENG APPR.	-	-
MFG ENG APPR.	-	-
Q.A.	-	-

DIMENSIONS ARE IN MILLIMETERS WHEN NOTED
DO NOT SCALE
TOLERANCES ARE DECIMALS
TOLERANCING PER ASME Y14.5M
DEFAULT DATUM IS COMMON CENTERLINE
REMOVE ALL BURRS
DIMENSIONS APPLY AFTER PLATING OR COATING

FIRST ANGLE PROJECTION

POWIN
PORTLAND, OR QINGDAO, CN

TITLE: STACK 750 ASSEMBLY COLLECTION SEGMENT

SIZE	DWG. NO.	REV.
D	A10400-00005-001C	1.0

SCALE: N/A | SHEET 1 OF 4

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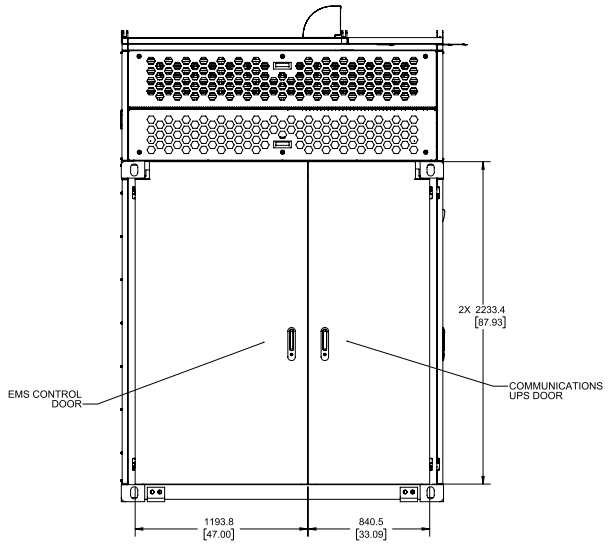
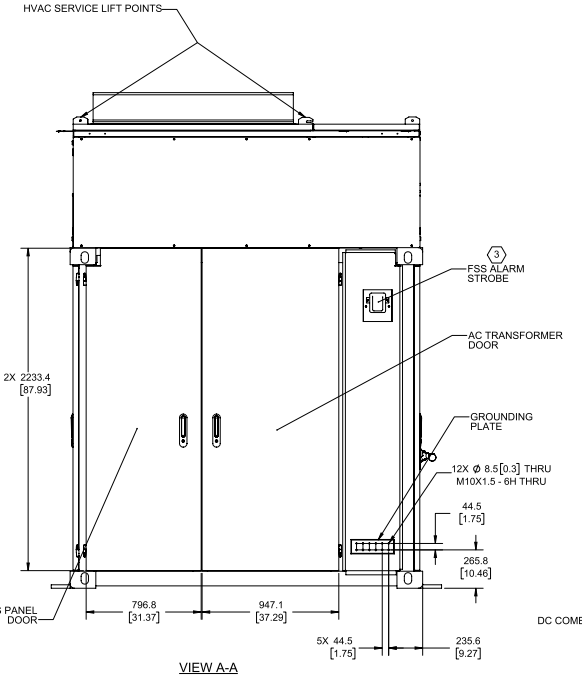
REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
-	-	See Sheet1	-	-

SHEET NOTES:

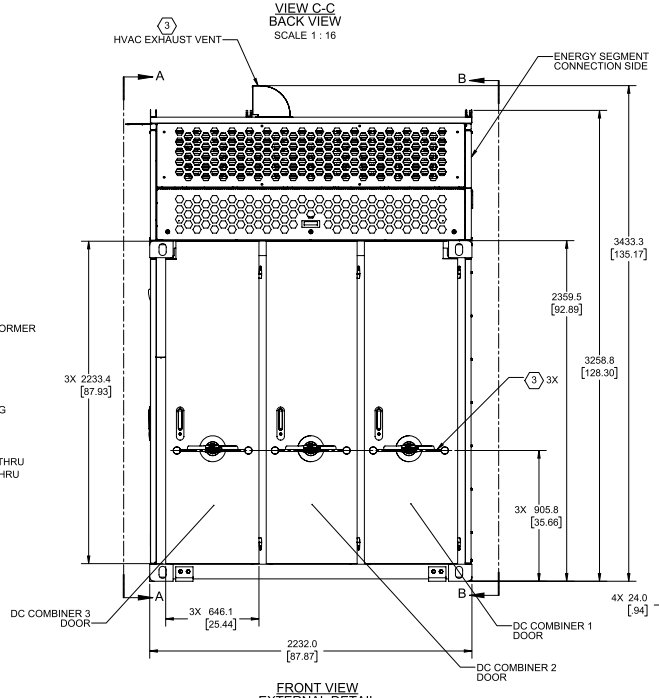
1. SOME ITEMS REMOVED FOR CLARITY
2. ALL INSTANCES.
3. SITE INSTALLED.



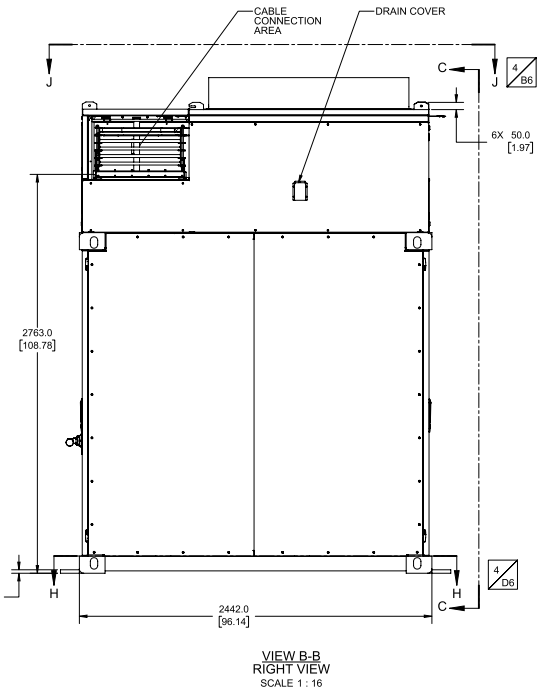
VIEW C-C
BACK VIEW
SCALE 1 : 16



VIEW A-A
LEFT VIEW
SCALE 1 : 16



FRONT VIEW
EXTERNAL DETAIL
SCALE 1 : 16



VIEW B-B
RIGHT VIEW
SCALE 1 : 16

POWIN
PORTLAND, OR QINGDAO, CN

TITLE:
STACK 750 ASSEMBLY
COLLECTION SEGMENT

MODEL:	SIZE	DWG. NO.	REV.
N/A	D	A10400-00005-001C	1.0
PROJECT: N/A	SCALE: N/A		SHEET 2 OF 4

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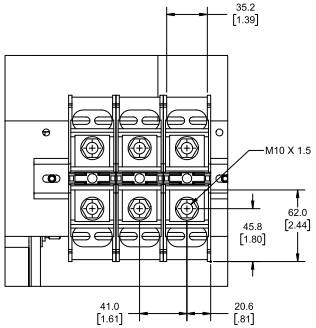
REVISIONS

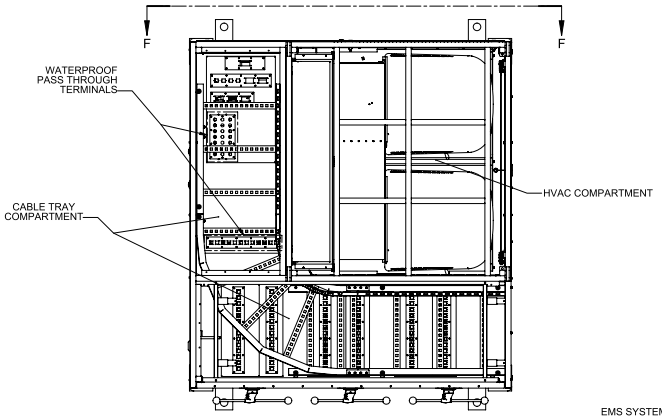
ZONE	REV.	DESCRIPTION	DATE	APPROVED
-	-	See Sheet1	-	-

SHEET NOTES:

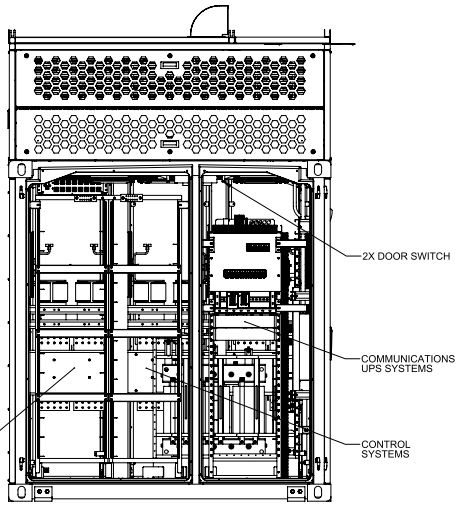
1. SOME ITEMS REMOVED FOR CLARITY
2. ALL INSTANCES
3. 10 X 750 P/4 DC CABINET SHOWN
4. MAX WIRE SIZE FOR DC CONNECTIONS: 750 KCMIL



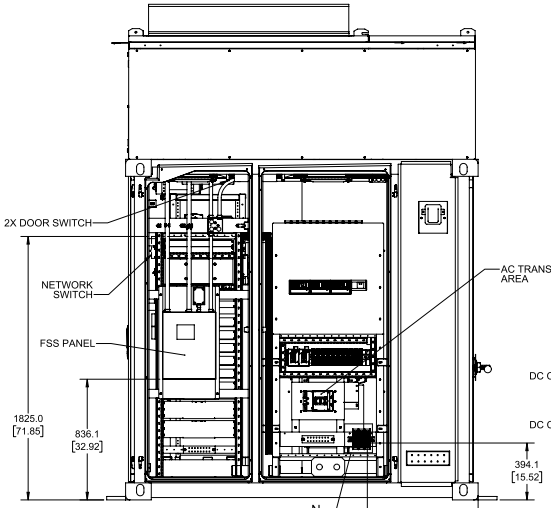
DETAIL N
AC CONNECTION DETAIL 1 2
SCALE 1 : 2



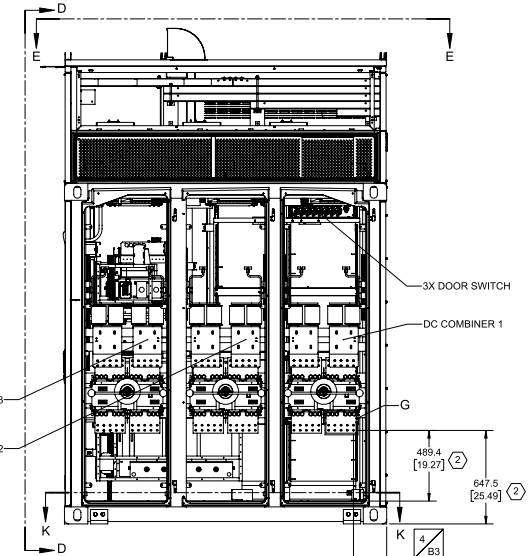
VIEW E-E
TOP VIEW 1
SCALE 1 : 16



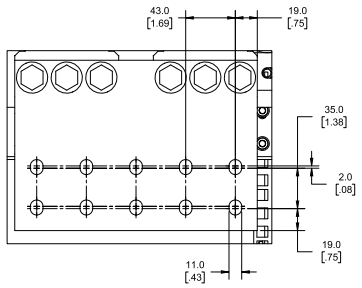
VIEW F-F
BACK VIEW 1
SCALE 1 : 16



VIEW D-D
LEFT VIEW 1
SCALE 1 : 16



FRONT VIEW
INTERNAL DETAIL 1 3
SCALE 1 : 16



DETAIL G
DC CONNECTION DETAIL 1 2 3
SCALE 1 : 2

POWIN
PORTLAND, OR QINGDAO, CN

TITLE: STACK 750 ASSEMBLY
COLLECTION SEGMENT

MODEL:	SIZE	DWG. NO.	REV.
N/A	D	A10400-00005-001C	1.0
PROJECT: N/A	SCALE: N/A		SHEET 3 OF 4

NOTICE OF PROPRIETARY RIGHTS

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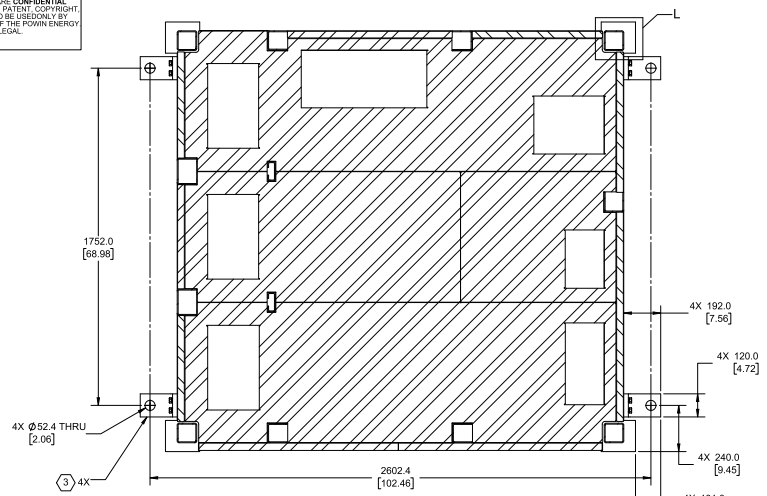
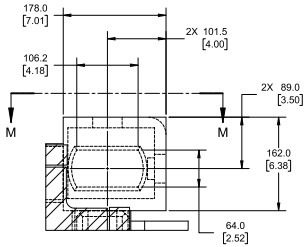
REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
-	-	See Sheet1	-	-

SHEET NOTES:

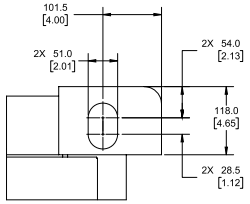
1. SOME ITEMS REMOVED FOR CLARITY
2. ALL INSTANCES
3. SITE INSTALLED



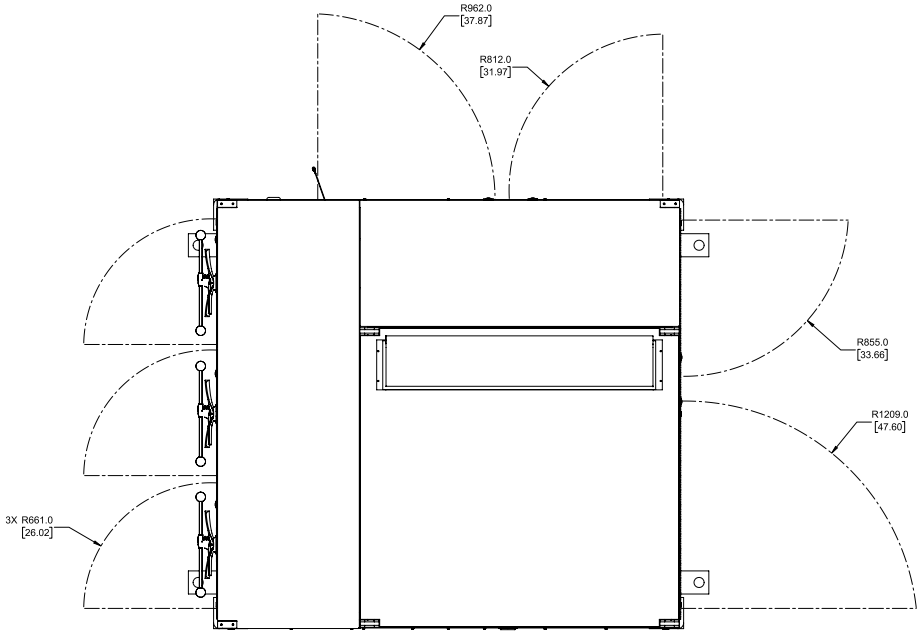
2/B3 SECTION H-H
ANCHORING LOCATIONS
SCALE 1 : 12



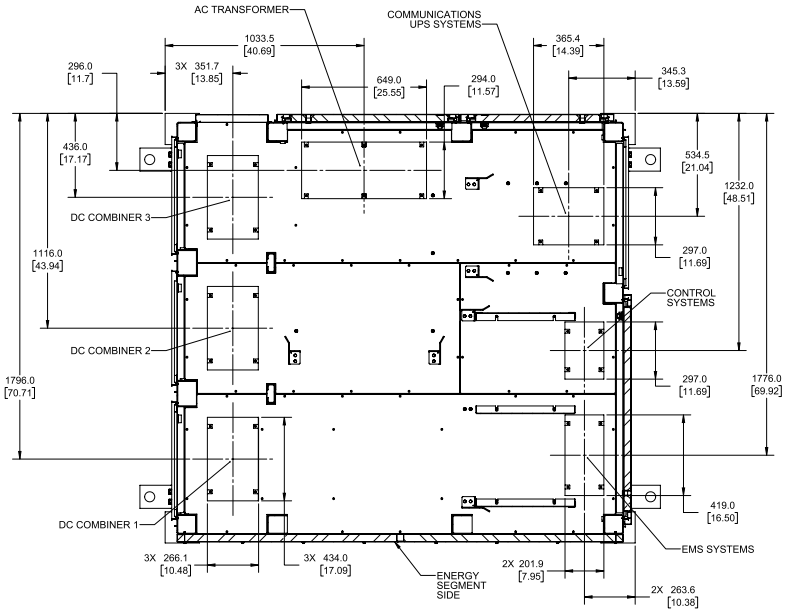
4X DETAIL L
ISO CORNER DETAIL
SCALE 1 : 4



VIEW M-M
SCALE 1 : 4



2/B3 VIEW J-J
DOOR CLEARANCES
SCALE 1 : 12



3/B5 SECTION K-K
FLOOR CUTOUTS 1
⌒ 90°
SCALE 1 : 12

POWIN
PORTLAND, OR QINGDAO, CN

TITLE: STACK 750 ASSEMBLY
COLLECTION SEGMENT

MODEL:	SIZE	DWG. NO.	REV.
N/A	D	A10400-00005-001C	1.0
PROJECT: N/A	SCALE: N/A		SHEET 4 OF 4

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 the significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.? See Discussion 1.18

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact," as indicated by the checklist on the following pages. Where checked below, the topic with a potentially significant impact will be addressed in an environmental impact report.

☐	Aesthetics	☐	Agriculture and Forest Resources	☐	Air Quality
☐	Biological Resources	☐	Cultural Resources	☐	Energy
☐	Geology / Soils	☐	Greenhouse Gas Emissions	☐	Hazards / Hazardous Materials
☐	Hydrology / Water Quality	☐	Land Use / Planning	☐	Mineral Resources
☐	Noise	☐	Population / Housing	☐	Public Services
☐	Recreation	☐	Transportation	☐	Tribal Cultural Resources
☐	Utilities / Service Systems	☐	Wildfire	☐	Mandatory Findings of Significance
		☐	None	☒	None with Mitigation Incorporated

DETERMINATION (To be completed by the Lead Agency)

On the basis of this initial evaluation:

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

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

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

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

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier **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.

Rowland Hickel — February 8, 2024

Prepared by Rowland Hickel, Senior Planner — Date

Dan Breedon — February 8, 2024

Reviewed by: Dan Breedon, Planning Manager — Date

EVALUATION OF ENVIRONMENTAL IMPACTS

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

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

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

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

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
   a) Earlier Analysis Used. Identify and state where they are available for review.
   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

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

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

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

9. The explanation of each issue should identify:
   a) the significance criteria or threshold, if any, used to evaluate each question; and
   b) the mitigation measure identified, if any, to reduce the impact to less than significance.

1.1 AESTHETICS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Aesthetics.				
Except as provided in Public Resources Code section 21099 (where aesthetic impacts shall not be considered significant for qualifying residential, mixed-use residential, and employment centers), would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) 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?	☐	☐	☒	☐

Discussion

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

Less than Significant. The area comprising the project site is vacant and currently used for agricultural and grazing purposes. The residence on the property is located approximately 1,000 north of the lease area. The nearest residence is located approximately 350 feet south of the southern lease area boundary. The majority of the property around the site is vacant agricultural/grazing land with single-family residences and outbuildings. Views from surrounding properties are of vacant agricultural land. The proposed solar arrays and battery storage area would be visible from La Porte Road and surrounding properties. However, the site and surrounding area are zoned for the proposed use with the approval of a Use Permit. The project would change views into the site; however, it will not substantially interfere with any scenic views or otherwise have a substantive negative aesthetic impact.

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

No impact. No designated scenic resources have been identified on the project site. The proposed project would not disturb features such as trees, rock outcroppings, and historic buildings within a state scenic highway. As stated, the solar arrays have been designed to avoid impacts to existing oak trees and wetland areas. The project site is not adjacent to a state scenic highway, and there are no scenic resources on the project site.

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 points.) 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 nearest publicly accessible area to the project site is La Porte Road along the western lease area boundary. As stated, the solar arrays and equipment area would be visible from adjacent roadways. The uses would be partially screened by security fencing; however, as stated, the project would change existing views into the site. It would not substantively degrade the existing visual character of the lease area or surrounding uses.

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

Less than significant impact. The security fencing would partially screen the solar arrays and battery storage area from view. The steel racking system will be a non-reflective, matte finish. The project would not require security lighting or otherwise add lighting and, thus, would not be a source of light or glare which would affect day or nighttime views. Impacts would be less than significant.

1.2 AGRICULTURE AND FOREST RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. Agriculture and Forest Resources.				
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.				
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Regulatory Setting

Williamson Act/Land Conservation Act (LCA) Contracts

The California Land Conservation Act of 1965, commonly known as the Williamson Act, was established based on numerous State legislative findings regarding the importance of agricultural lands in an urbanizing society. Policies emanating from those findings include those that discourage premature and unnecessary conversion of agricultural land to urban uses and discourage discontinuous urban development patterns, which unnecessarily increase the costs of community services to community residents. The Williamson Act authorizes each County to establish an agricultural preserve. Land that is within the agricultural preserve is eligible to be placed under a contract between the property owner and County that would restrict the use of the land to agriculture in exchange for a tax assessment that is based on the yearly production yield. The contracts have a 9-year term that is automatically renewed each year unless the property owner or county requests a non-renewal or the contract is canceled.

Farmland Mapping and Monitoring Program

The California Farmland Mapping and Monitoring Program (FMMP) develops statistical data for analyzing impacts on California's agricultural resources. The FMMP program characterizes "Prime Farmland" as land with the best combination of physical and chemical characteristics that are able to sustain long-term production of agricultural crops. "Farmland of Statewide Importance" is characterized as land with a good combination of physical and chemical characteristics for agricultural production, but with less ability to store soil moisture than prime farmland. "Unique Farmland" is used for the production of the state's major crops on soils not qualifying as prime farmland or of statewide importance. The FMMP also identifies "Grazing Land," "Urban and Built-up Land," "Other Land," and "Water" that are not included in any other mapping category.

California Public Resources Code Section 4526

"Timberland" means land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis.

California Public Resources Code Section 12220(g)

"Forest land" is 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.

Discussion

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

No impact. The California Farmland Mapping and Monitoring Program designates the site as "Grazing Land." Project improvements would not impact prime, unique, or farmland of statewide importance.

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

No impact. The project site is not under an existing Williamson Act Contract. The site is zoned AG-20 (Agriculture, minimum 20-acre parcel size), which allows for siting of Tier 4 solar energy systems, where most or all power generated is delivered off-site, on "Grazing Land" or "Other Land" as defined by the California Farmland Mapping and Monitoring Program. The project will be sited on Grazing Land and, therefore, is eligible for a conditional use permit, subject to compliance with the standards set forth in County Code section 24-157(C). Among other criteria, the project applicant must acknowledge the County's Right to Farm Ordinance and shall be required to record a Right to Farm Notice on the project site prior to issuance of any building permits to minimize conflicts with surrounding agricultural uses. All actions associated with the project would be confined to the project site. The project will not conflict with existing zoning or agricultural use of a parcel under 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))?

No impact. The project site is zoned AG-20, and the surrounding area is not classified as forestland, as defined in Public Resources Code Section 12220(g), or as timberland, as defined in Public Resources Code Section 4526. The project site is not zoned or designated for forest or timber resource uses.

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

No impact. The project site is a vacant agricultural property. There are no trees or timber resources classified as forestland, as defined in Public Resources Code Section 12220(g), or as timberland, as defined in Public Resources Code Section 4526.The project would require the removal of 0.10-acre of existing oak canopy. This is addressed below in Section 1.4, *Biological Resources*. This impact would not be considered a loss of forest or forest land. Therefore, the proposed project would not result in the loss or conversion of forest land to a 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?

No impact. The project site is designated as "Grazing Land" under the California Farmland Mapping and Monitoring Program. All proposed development and subsequent use of the site would occur within the areas of the property that are designated as "Grazing Land" and are currently developed. Therefore, the project would not result in the conversion of Farmland to a non-agricultural use.

1.3 AIR QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. Air Quality.				
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations.				
Are significance criteria established by the applicable air district available to rely on for significance determinations?	☒ Yes		☐ No	
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

Butte County is located within the Sacramento Valley Air Basin (SVAB), comprising the northern half of California's 400-mile long Great Central Valley. The SVAB encompasses approximately 14,994 square miles with a largely flat valley floor (excepting the Sutter Buttes) about 200 miles long and up to 150 miles wide, bordered on its east, north and west by the Sierra Nevada, Cascade and Coast mountain ranges, respectively.

The SVAB, containing 11 counties and some two million people, is divided into two air quality planning areas based on the amount of pollutant transport from one area to the other and the level of emissions within each. Butte County is within the Northern Sacramento Valley Air Basin (NSVAB), which is composed of Butte, Colusa, Glenn, Shasta, Sutter, Tehama, and Yuba Counties.

Emissions from the urbanized portion of the basin (Sacramento, Yolo, Solano, and Placer Counties) dominate the emission inventory for the Sacramento Valley Air Basin, and on-road motor vehicles are the primary source of emissions in the Sacramento metropolitan area. While pollutant concentrations have generally declined over the years, additional emission reductions will be needed to attain the State and national ambient air quality standards in the SVAB.

Seasonal weather patterns have a significant effect on regional and local air quality. The Sacramento Valley and Butte County have a Mediterranean climate, characterized by hot, dry summers and cool, wet winters. Winter weather is governed by cyclonic storms from the North Pacific, while summer weather is typically subject to a high-pressure cell that deflects storms from the region.

In Butte County, winters are generally mild with daytime average temperatures in the low 50s°F and nighttime temperatures in the upper 30s°F. Temperatures range from an average January low of approximately 36°F to an average July high of approximately 96°F, although periodic lower and higher temperatures are common. Rainfall between

October and May averages about 26 inches but varies considerably year to year. Heavy snowfall often occurs in the northeastern mountainous portion of the County. Periodic rainstorms contrast with occasional stagnant weather and thick ground or "tule" fog in the moister, flatter parts of the valley. Winter winds generally come from the south, although north winds also occur.

Diminished air quality within Butte County largely results from local air pollution sources, transport of pollutants into the area from the south, the NSVAB topography, prevailing wind patterns, and certain inversion conditions that differ with the season. During the summer, sinking air forms a "lid" over the region, confining pollution within a shallow layer near the ground that leads to photochemical smog and visibility problems. During winter nights, air near the ground cools while the air above remains relatively warm, resulting in little air movement and localized pollution "hot spots" near emission sources. Carbon monoxide, nitrogen oxides, particulate matters and lead particulate concentrations tend to elevate during winter inversion conditions when little air movement may persist for weeks.

As a result, high levels of particulate matter (primarily fine particulates or PM2.5) and ground-level ozone are the pollutants of most concern to the NSVAB Districts. Ground-level ozone, the principal component of smog, forms when reactive organic gases (ROG) and nitrogen oxides (NOx) – together known as ozone precursor pollutants – react in strong sunlight. Ozone levels tend to be highest in Butte County during late spring through early fall, when sunlight is strong and constant, and emissions of the precursor pollutants are highest (Butte County CEQA Air Quality Handbook 2014).

Air Quality Attainment Status

Local monitoring data from the BCAQMD is used to designate areas a nonattainment, maintenance, attainment, or unclassified for the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). The four designations are further defined as follows:

Nonattainment – assigned to areas where monitored pollutant concentrations consistently violate the standard in question.

Maintenance – assigned to areas where monitored pollutant concentrations exceeded the standard in question in the past but are no longer in violation of that standard.

Attainment – assigned to areas where pollutant concentrations meet the standard in question over a designated period of time.

Unclassified – assigned to areas where data are insufficient to determine whether a pollutant is violating the standard in question.

Table 1.3-1. Federal and State Attainment Status of Butte County

POLLUTANT	STATE DESIGNATION	FEDERAL DESIGNATION
1-hour ozone	Nonattainment	-
8-hour ozone	Nonattainment	Nonattainment
Carbon monoxide	Attainment	Attainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
24-Hour PM10	Nonattainment	Attainment
24-Hour PM2.5	No Standard	Attainment
Annual PM10	Attainment	No Standard
Annual PM2.5	Nonattainment	Attainment

Source: Butte County AQMD, 2018

Sensitive Receptors

Sensitive receptors are frequently occupied locations where people who might be especially sensitive to air pollution are expected to live, work, or recreate. These types of receptors include residences, schools, churches, health care facilities, convalescent homes, and daycare centers. The project is located on an agricultural property surrounded by a agricultural parcels. A FR-5 parcel and single-family residence is located to the south. Table 1.3-2 lists sensitive receptors that were identified in the project vicinity and the distances from the project site.

Table 1.3-2. Sensitive Receptors in the Project Vicinity

SENSITIVE RECEPTORS	DISTANCE FROM PROJECT SITE TO RECEPTOR
Residence (5864 La Porte Road)	445 feet north
Residence (5768 La Porte Road)	350 feet south
Residence (5774 La Porte Road)	20 feet south
Residence (5926 La Porte Road)	1000 feet north
Residence (40 Webb Creek Circle)	700 feet northwest

Source: Butte County Geographical Information System/Google Earth imagery

Butte County Air Quality Management District

The Butte County Air Quality Management District (BCAQMD) is the local agency with primary responsibility for compliance with both federal and state standards and for ensuring that air quality conditions are maintained. They do this through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues.

Activities of the BCAQMD include the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations concerning sources of air pollution, issuance of permits for stationary sources of air pollution, inspection of stationary sources of air pollution, and response to citizen complaints, monitoring of ambient air quality and meteorological conditions, and implementation of programs and regulations required by the FCAA and CCAA.

According to the State CEQA Guidelines, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make significance determinations for potential impacts on environmental resources. BCAQMD is responsible for ensuring that state and federal ambient air quality standards are not violated within Butte County. Analysis requirements for construction and operation-related pollutant emissions are contained in BCAQMD's *CEQA Air Quality Handbook: Guidelines for Assessing Air Quality and Greenhouse Gas Impacts for Projects Subject to CEQA Review*. Established with these guidelines are screening criteria to determine whether or not additional modeling for criteria air pollutants is necessary for a project. The CEQA Air Quality Handbook also contains thresholds of significance for construction-related and operation-related emissions: ROG, NOx and PM10. The screening criteria listed in Table 1.3-4 were created using CalEEMod version 2013.2.2 for the given land use types. To determine if a proposed project meets the screening criteria, the size and metric for the land use type (units or square footage) should be compared with that of the proposed project. If a project is less than the applicable screening criteria, then further quantification of criteria air pollutants is not necessary, and it may be assumed that the project would have a less than significant impact on criteria air pollutants. If a project exceeds the size provided by the screening criteria for a given land use type, then additional modeling and quantification of criteria air pollutants should be performed (Butte County Air Quality Management District 2014).

Table 1.3-4. Screening Criteria for Criteria Air Pollutants

LAND USE TYPE	MAXIMUM SCREENING LEVELS FOR PROJECTS
Single-Family Residential	30 Units
Multi-Family (Low Rise) Residential	75 Units
Commercial	15,000 square feet
Educational	24,000 square feet
Industrial	59,000 square feet
Recreational	5,500 square feet
Retail	11,000 square feet
Source: Butte County AQMD, CEQA Air Quality Handbook, 2014	

Discussion

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

No impact. A project is deemed inconsistent with an air quality plan if it would result in population or employment growth that exceeds the growth estimates in the applicable air quality plan (i.e., generating emissions not accounted for in the applicable air quality plan emissions budget). Therefore, proposed projects need to be evaluated to determine whether they would generate population and employment growth and, if so, whether that growth would exceed the growth rate included in the applicable air quality plan.

The proposed project would not result in population growth in the County. No additional employees would be required to operate the facility. As stated, six annual inspection/maintenance trips would be required to wash the panels, inspect the site, and perform preventative maintenance. Further, the project would not result in a substantial increase in criteria air pollutants that would cause significant impacts to regional air quality.

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

Less than significant impact. The proposed solar arrays and battery storage area would be on a 17-acre portion of an 82-acre parcel. Ground disturbance would be required to grade the access road and battery storage pad. Trenching would be required for installation of the underground electrical conduit. Equipment would be used to install the solar racking system. During peak construction, up to 40 people would work on the site and five heavy truck trips would occur daily to deliver materials.

Construction-related emissions are generally created throughout the course of project implementation and would originate from construction equipment exhaust, worker vehicle exhaust, dust from grading disturbance, exposed soil eroded by wind, and ROGs generated from architectural coating and asphalt paving. The California Emission Estimator Model (CalEEMod) version 2022.1 was used to estimate daily project construction emissions during the construction duration which is anticipated to begin in mid-2024 and extend through early 2025. Emission calculations assume the site would be watered twice daily to control fugitive dust emissions. Construction emissions and BCAQMD daily emission thresholds are shown in Table 1.3-5.

Table 1.3-5 Maximum Daily Construction Emissions

Phase	ROG (lbs/day)*	NOx (lbs/day)*	PM_{10} (lbs/day)*
Site Preparation	1.4	13.6	0.6
Grading	1.6	15.8	0.7
Construction	1.1	9.4	0.4
BCAQMD Threshold	137	137	80
Threshold Exceeded	No	No	No

Source: Butte County AQMD, CEQA Air Quality Handbook, 2014
*Emissions reported are for off-road construction equipment

Construction-related emissions would vary depending on the level of activity, length of the construction period, specific construction operations occurring, types of equipment operating on the site, number of personnel, wind and precipitation conditions, and soil moisture content. As shown in Table 1.3-5, project construction would not exceed the BCAQMD daily significance thresholds. While the project would not exceed the daily thresholds, there are a number of feasible control measures that can be reasonably implemented to reduce construction-related emissions to less than significant. These measures as well as other common air pollution control measures are recommended in *Appendix C of BCAQMD's CEQA Handbook (2014)* and are to be implemented as **Mitigation Measure AIR-1**, listed below.

Operation of the project wouldn't generate any emissions except that associated with six annual maintenance/inspection visits. Thus, the project would not exceed the significance thresholds established in the BCAQMD, CEQA Air Quality Handbook.

c) Expose sensitive receptors to substantial pollutant concentrations?

No impact. Sensitive receptors in the project area and their distances from the project site are shown in Table 1.3-2. Based on the information provided in section b.), above, the proposed project would not result in the violation of any air quality standards or contribute substantially to an existing or projected air quality violation.

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

Less than significant impact. The project will not create a new source of objectionable odors nor would odors be detectable at off-site properties. The solar array and battery storage area would not generate odors that would impact a substantial number of people for an extended time.

Mitigation Measures

Mitigation Measure AIR-1

The following best practice measures to reduce impacts to air quality shall be incorporated by the project applicant, subject property owners, or third-party contractors during construction activities on the project site. These measures are intended to reduce criteria air pollutants that may originate from the site during the course of land clearing and other construction operations.

Diesel PM Exhaust from Construction Equipment and Commercial On-Road Vehicles Greater than 10,000 Pounds

- All on- and off-road equipment shall not idle for more than five minutes. Signs shall be posted in the designated queuing areas and/or job sites to remind drivers and operators of the five-minute idling limit.
- Idling, staging and queuing of diesel equipment within 1,000 feet of sensitive receptors is prohibited.
- All construction equipment shall be maintained in proper tune according to the manufacturer's specifications. Equipment must be checked by a certified mechanic and determined to be running in proper condition before the start of work.
- Install diesel particulate filters or implement other CARB-verified diesel emission control strategies.
- Shall not operate a diesel-fueled auxiliary power system (APS) to power a heater, air conditioner, or any ancillary equipment on that vehicle during sleeping or resting in a sleeper berth for greater than 5 minutes at any location when within 100 feet of restricted areas.
- To the extent feasible, truck trips shall be scheduled during non-peak hours to reduce peak hour emissions.

Operational TAC Emissions

- All mobile and stationary Toxic Air Contaminants (TACs) sources shall comply with applicable Airborne Toxic Control Measures (ATCMs) promulgated by the CARB throughout the life of the project (see http:www.arb.ca.gov/toxics/atcm/atcm.htm).
- Stationary sources shall comply with applicable District rules and regulations.

Fugitive Dust

Construction activities can generate fugitive dust that can be a nuisance to local residents and businesses near a construction site. Dust complaints could result in a violation of the District's "Nuisance" and "Fugitive Dust" Rules 200 and 205, respectively. The following is a list of measures that may be required throughout the duration of the construction activities:

- Reduce the amount of the disturbed area where possible.
- Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. An adequate water supply source must be identified. Increased watering frequency would be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water should be used whenever possible.
- All dirt stockpile areas should be sprayed daily as needed, covered, or a District-approved alternative method will be used.
- Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible following completion of any soil disturbing activities.
- Exposed ground areas that will be reworked at dates greater than one month after initial grading should be sown with a fast-germinating non-invasive grass seed and watered until vegetation is established.
- All disturbed soil areas not subject to re-vegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the Butte County Air Quality Management District.
- All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site.
- All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with local regulations.
- Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site.
- Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water should be used where feasible.
- Post a sign in a prominent location visible to the public with the telephone numbers of the contractor and the Butte County Air Quality Management District - (530) 332-9400 for any questions or concerns about dust from the project.

All fugitive dust mitigation measures required shall be shown on grading and building plans. In addition, the contractor or builder should designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend period when work may not be in progress. The name and telephone number of such persons shall be provided to the District prior to land use clearance for map recordation and finished grading of the area.

Please note that violations of District Regulations are enforceable under the provisions of California Health and Safety Code Section 42400, which provides for civil or criminal penalties of up to $25,000 per violation.

Plan Requirements: This note shall be placed on all building and site development plans.

Timing: Requirements of the condition shall be adhered to throughout all grading and construction periods.

Monitoring: The Butte County Department of Development Services shall ensure that the note is placed on all building and site development plans. Butte County Air Pollution Control District inspectors shall respond to nuisance complaints.

1.4 BIOLOGICAL RESOURCES

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

Environmental Setting

Vegetation Communities

Agricultural Land

The site is zoned Agriculture, 20-acre (AG-20). The project would be constructed on a 17-acre lease area on the 82-acre parcel. Agricultural land is located to the north, east, and west. Foothill Residential zoning is located to the south. Common species observed within this community type include mourning dove, American crow, Brewer's blackbird, sandhill crane, various raptor species, egrets, and many species of rodents.

Special-Status Species

Many species of plants and animals within the State of California have low populations, limited distributions, or both. Such species may be considered "rare" and are vulnerable to extirpation as the state's human population grows and the habitats these species occupy are converted to agricultural and urban uses. A sizable number of native species and animals have been formally designated as threatened or endangered under State and Federal endangered species legislation. Others have been designated as "Candidates" for such listing and the California Department of Fish and Wildlife (CDFW) have designated others as "Species of Special Concern". The California Native Plant Society (CNPS) has developed its own lists of native plants considered rare, threatened or endangered. Collectively, these plants and animals are referred to as "special status species."

Various direct and indirect impacts to biological resources may result from the small amount of development enabled by the project, including the loss and/or alteration of existing undeveloped open space that may serve as habitat. Increased vehicle trips to and from the project site can result in wildlife mortality and disruption of movement patterns within and through the project vicinity. Disturbances such as predation by pets (e.g., cats and dogs) and human residents may also occur at the human/open space interface, while conversion of land from lower to higher density residential use can lead to a predominance of various urban-adapted wildlife species (e.g., coyotes, raccoons, ravens and blackbirds) that have been observed to displace more sensitive species.

California Environmental Quality Act Guidelines Section 15065 requires a mandatory finding of significance for projects that have the potential to substantially degrade or reduce the habitat of a threatened or endangered species, and to fully disclose and mitigate impacts to special status resources. For the purposes of this Initial Study, the California Environmental Quality Act (Sections 21083 and 21087, Public Resources Code) defines mitigation as measure(s) that:

- Avoids the impact altogether by not taking a certain action or parts of an action.
- Minimizes impacts by limiting the degree or magnitude of the action and its implementation.
- Rectifies the impact by repairing, rehabilitating, or restoring the impacted environment.
- Reduces or eliminates the impact over time by preservation and maintenance operations during the life of the project.
- Compensates for the impact by replacing or providing substitute resources or environments.

The California Natural Diversity Database (CNDDB) was reviewed to determine if any special-status species have the potential to occur on the project site or its vicinity. Table 1.4-1 lists each special-status species identified within a two-mile radius of the project site, along with regulatory status and habitat requirements for each special-status species. A total of two special-status species are known to inhabit areas within the vicinity of the project site.

Table 1.4-1. Special-Status Species in the vicinity of the project site

Scientific Name	Common Name	Federal Status	State Status	CNPS/DFG List	Habitat
PLANTS					
Clarkia biloba ssp. brandegeeae	Brandegee's clarkia	None	None	4.2	Annual herb native to California. Found in Yellow Pine Forest, Foothill Woodland and Chaparral
BIRDS					
Laterallus jamaicensis coturniculus	California black rail	None	Threatened		Most California Black Rails are found in the tidal salt marshes of the northern San Francisco Bay region, primarily in San Pablo and Suisun Bays. Also found in

				freshwater marshes in the foothills of the Sierra Nevada.
AMPHIBIANS				
Rana boylii	Yellow-legged frog	None	Candidate threatened	California's Sierra Nevada mountains in lakes, ponds, marshes, meadows and streams at elevations ranging from 4,500 to 12,000 feet

Source: California Natural Diversity Database.

Discussion

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 the U.S. Fish and Wildlife Service?

Less than significant with mitigation. A Botanical Survey (Kleinfelder, June 2023) was conducted to evaluate Special-Status Plant Species with known or potential occurrence in the vicinity of the project site. A Biological Resources Assessment (Kleinfelder, June 2023) was also prepared, which included field studies to evaluate botanical and wildlife resources within the project study area, including habitat suitability for special status wildlife and plant species, including rare plants.

During the pre-application review, foothill yellow-legged frog was identified as special-status species with potential to occur in Wilson Creek which is located on the subject property but north of the lease area. The Biological Resources Assessment states that Wilson Creek is outside the project disturbance area and is an ephemeral stream with heavily vegetated banks. The foothill yellow-legged frogs inhabit perennial streams; thus, it was determined that Wilson Creek would not support foothill yellow-legged frog.

California black rail requires water depths of about one inch that do not fluctuate during the year and dense vegetation for nesting habitat. The ponds and wetlands that occur in the lease area and adjacent lands (within 300 feet) lack the necessary vegetative cover and depth requirements for this species. Thus, the site would not support the California black rail. The Biological Resources Assessment states that no other special-status wildlife species have a moderate or greater potential to occur within the Project area due to a lack of suitable habitat or because the site is outside of the species' known range. The Mitigation Measures BIO-1, BIO-2 and BIO-3 below are recommended to avoid potentially adverse impacts during construction. The implementation of these measures would reduce potential impacts to less than significant.

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

No impact. The portions of the site proposed for disturbance do not include any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service.

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

No impact. As stated in the Aquatic Resources Mapping Report (Kleinfelder, December 2022) prepared for the lease area and the surrounding area comprising 57.9 acres, identified 2.222 acres of aquatic resources including 0.020 acre of ephemeral channel, 0.832 acre of intermittent channel, 0.606 acre of seasonal wetland, and 0.764 acre of seasonal wetland complex. However, the project has been designed to avoid these resources; thus, the project action would have no effect on any state or federally-protected wetlands, marsh areas or vernal pool resources.

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. Per the Butte County General Plan Update 2040, Figure COS-3, the project site is within a Deer Herd Wintering Area Overlay. The overlay is intended to protect sensitive habitat areas for migratory deer herds while continuing to allow development and the reasonable use of land within these areas. The Butte Utility-Scale Solar Guide addresses potential impacts to migratory deer herds by recommending special design measures that include accommodating wildlife movement corridors to reduce habitat fragmentation and disturbance, as well as other adverse impacts on migration. To minimize impacts to wildlife movement, the applicant has incorporated routes between the solar arrays, which would allow migrating wildlife to cross through the development area, as well as an 8-foot high exclusionary fencing with woven fabric to screen the solar arrays. This is intended to deter deer from attempting to jump the fence. With the incorporation of these design features, impacts to migratory corridors would be less than significant.

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

Less than significant with mitigation. An Oak Woodland Evaluation Plan (Kleinfelder, June 2023) was prepared in accordance with Senate Bill (SB) 1334 (Oak Woodlands Conservation: Environmental Quality) passed in 2004 and Butte County's Draft Oak Woodland Mitigation Ordinance and the Oak Woodland Technical Manual, which was produced as a companion document to the ordinance that establishes specific technical regulations, standards and specifications necessary to implement the ordinance.

The evaluation determined that 9.91 acres of oak canopy is present within the lease area. As designed, the Project would remove 0.10 acre, one percent, of the oak canopy to accommodate construction of the proposed access road. The Project will not result in the removal of any tree 24-inches in Diameter Breast Height (DBH) or larger. Because the Project will not result in the removal of oak canopy acreage above the 10% threshold, which triggers mitigation, mitigation will not be required to replace the few trees being removed. Trees that will remain within or adjacent to the work area will be demarcated by a protective barrier and signage. These protective measures are consistent with the draft Oak Woodland Technical Manual referenced above. While the Butte County Draft Oak Woodland Mitigation Ordinance and the Oak Woodland Technical Manual have not been formally adopted, this material does provide guidance for the development of mitigation measures to avoid or reduce impacts to oak woodlands. **Mitigation Measure BIO-4** defines the methods that would be implemented to reduce or avoid potential impacts to the Critical Root Zone (CRZ) for oak trees located proximal to the disturbance area. With mitigation, impacts would be less than significant.

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

No impact. The Butte Regional Conservation Plan (BRCP) is a joint Habitat Conservation Plan (HCP)/National Community Conservation Plan (NCCP) that is currently being prepared for the western half of Butte County. In the event the BRCP is adopted, individual projects and development that occur in the BRCP planning area would need to be coordinated with the Butte County Association of Governments to ensure that the project does not conflict with the BRCP. No resources affected by the plan occur on-site. Further, because the plan has not been adopted, the proposed project will not conflict, nor interfere with, the attainment of the goals of the proposed plan.

Mitigation Measures

Mitigation Measure BIO-1

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

Nesting bird surveys shall be conducted by a qualified avian biologist no more than seven (7) days prior to any construction, vegetation clearing or ground disturbance activities during the nesting season (March 1 – August 31) to determine if any native birds are nesting on or near the site (including a 150-foot buffer for raptors). Preconstruction surveys shall focus on both direct and indirect evidence of nesting, including nest locations and nesting behavior. The qualified avian biologist will make every effort to avoid potential nest predation as a result of survey and monitoring efforts. If active nests are found during the preconstruction nesting bird surveys, a Nesting Bird Plan (NBP) shall be prepared and implemented by the qualified avian biologist. At a minimum, the NBP shall include guidelines for addressing active nests, establishing buffers, ongoing monitoring, the establishment of avoidance and minimization measures, and reporting. The size and location of all buffer zones, if required, shall be based on the nesting species, individual/pair's behavior, nesting stage, nest location, its sensitivity to disturbance, and intensity and duration of the disturbance activity.

Timing: This measure shall be implemented no more than seven days prior to all site preparation and construction activities.

Monitoring: The Department of Development Services shall ensure this measure is included as a Condition of Approval on the use permit.

Mitigation Measure BIO-2

Trash Receptacles. Impacts to special-status species and native nesting birds due to increased predation from construction activities could be considered a significant impact in the context of CEQA. All trash and waste items generated by construction or crew activities shall be properly contained in a covered trash receptacle and removed from the Project Site daily. This includes biodegradable items, such as apple cores and banana peels, that attract predators such as raccoons and American crows that could prey upon sensitive wildlife species.

Timing: This measure shall be implemented during all site preparation and construction activities.

Monitoring: The Department of Development Services shall ensure this measure is included as a Condition of Approval on the use permit.

Mitigation Measure BIO-3

Common Wildlife Awareness. All Project personnel will visually check for animals in any pipes, culverts, or other open-ended materials and equipment stored on-site for one or more overnight periods prior to moving, burying, or capping to ensure that no animals are present within the materials and equipment. To prevent accidental entrapment of wildlife during construction, all excavated holes, ditches, or trenches greater than six (6) inches deep will be covered at the end of each workday by suitable materials that cannot be displaced, or escape ramps will be placed in excavations. After opening and before filling holes, ditches, and trenches, the areas will be thoroughly inspected for trapped animals.

Timing: This measure shall be implemented during all site preparation and construction activities.

Monitoring: The Department of Development Services shall ensure this measure is included as a Condition of Approval on the use permit.

Mitigation Measure BIO-4 (Oak Woodland):

Prior to initiating any land clearing, grading, or other construction activities, a protective fence of chain link or high visibility plastic mesh fencing shall be placed five feet beyond the established critical root zone (CRZ) of the tree or group of trees being protected within 100 feet of work areas under the approval of a qualified professional. Warning signs shall be prominently displayed on each fence to ensure avoidance of protected trees. The signs shall be a minimum of 16 x 24 inches, brightly colored, and clearly visible from the ground and from vehicles. The signs must clearly indicate that the CRZ is a restricted area. The fencing shall remain in place until a final inspection by a qualified professional.

The CRZ is defined as the radius in feet equal to the inches of a tree's DBH (with an 8-foot minimum distance for trees with DBH of 5-8"). Activities prohibited within the CRZ include: 1) Grade changes (2) Drainage changes 3) The severing of roots over 2" in diameter (unless done with approval from a qualified professional) 4) Heavy equipment use, vehicular traffic, parking of vehicles 5) The use of tree trunks as winch support, anchorage, as a temporary power pole, signpost or other similar function 6) Storage or dumping of construction materials, waste, or tools.

Trenching, pipe or conduit installation within the CRZ must either be cut by hand, air spade, by mechanically boring a tunnel under the roots with a horizontal directional drill (hydraulic or pneumatic air excavation) or any other method approved by a qualified professional (Certified Arborist). Tunneling under a root system can greatly reduce damage to the tree as well as minimize the cost of replacing landscaping or other features. Tunneling may be restricted by sloped areas or rocky soils. Once the pipe or conduit has been installed, the tunnel should be backfilled with excavated soil, and the disturbed area should be irrigated the same day.

If driving over these areas is unavoidable, tires should be deflated slightly to redistribute the weight over a larger area. If repeated crossings are required, up to six inches of mulch should be placed over the CRZ to prevent compaction. The mulch material shall be composed of two-inch untreated wood chip mulch or an approved equal per the qualified professional. Plywood can also be used to construct a temporary crossing bridge that distributes vehicle weight over the CRZ. The contractor shall consult with a qualified professional to determine the best mitigation method and to review soil compaction mitigations before beginning construction.

If a tree or group of trees is adjacent to or in immediate proximity to a grade slope of 8% (23 degrees) or more, then erosion control or silt barriers shall be installed outside the CRZ to prevent siltation and/or erosion within the CRZ. Erosion and sedimentation control barriers shall be installed or maintained in a manner which does not result in soil build-up within tree drip lines or CRZs.

The project contractor, consultant, or manager will collaborate with a qualified professional to verify, in writing, that all pre-construction oak woodlands preservation conditions have been met as follows:

1. Tree fencing has been installed around any trees or tree areas that are to be preserved.

2. Erosion control has been secured on trees or tree areas that are to be preserved.

3. Tree pruning has been completed, if necessary.

4. Preventative measures for soil compaction have been installed.

5. A tree maintenance schedule has been established, if needed.

Written verification of the above conditions must be submitted to and approved by the Department of Development Services prior to the removal of oak trees.

Contractors or employees who will be interacting with trees or operating within the CRZ must attend a pre-construction meeting with a qualified professional. The meeting will be intended to ensure that all involved parties are aware of the tree protection measures and procedures that will be employed. The meeting will also review procedures, tree protections, hauling routes, staging areas, and any other procedures deemed important by a qualified professional.

1.5 CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Cultural Resources.				
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

Discussion

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

Less than significant impact. A Cultural Resources Inventory and Evaluation was conducted within a 44.7-acre area comprising the lease area, access and staging areas (Kleinfelder, July 2023). The project area does not contain any buildings or structures that have the potential to be a historical resource. The cultural resource inventory included a review of the natural and cultural environment including the prehistory, ethnography, and history; a review of historic maps; record search results from the Northeast Information Center (NEIC); and a pedestrian survey. As a result of these efforts, the study identified two historic-era resources within a 0.5-mile radius of the study area which comprises 44.7 acres and includes the lease area, access and staging areas. Both resources have previously been recommended ineligible for inclusion in the National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR).

An intensive pedestrian survey of the study area was conducted in September 2022 and May 2023 using 15-meter-wide parallel transects resulting in 100 percent survey coverage. The survey resulted in the recordation of eight historic-era resources: a stacked rock feature (LPRSP-JR-1), the remnants of an earthen stock pond (LPRSPJR-2), two earthen reservoirs (LPRSP-JR-3 and LPRSP-JR-4), a ditch segment (LPRSP-JR-5), a stone wall (LPRSP-JR-6), a power pole and associated pump (LPRSP-JR-7), and placer mining tailings (LPRSP-JR-8). The resources were recorded on Department of Parks and Recreation 523-series forms. All eight resources are recommended as ineligible for listing under any criteria for the NRHP and CRHP. Therefore, the impact is considered less than significant, and no mitigation is required.

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

Less than significant with mitigation. Construction or ground-disturbing activities are proposed that may result in impacts to known historic or cultural resources. No features exist on the property, including objects, sites, or landscapes, that could be considered as having cultural value to California Native American tribes, or eligible for listing in the California Register of Historic Resources. However, **Mitigation Measures CUL-1**, **CUL-2**, and **CUL-3** are recommended in the event that any previously unknown cultural resources are discovered

during excavation and/or ground-disturbing activities. With the implementation of mitigation measures, if needed, impacts to cultural resources would be less than significant.

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

Less than significant with mitigation. Construction and ground-disturbing activities are proposed that may result in impacts to unknown human remains. **Mitigation Measure CUL-2** is recommended in the event that remains are discovered during excavation and/or ground disturbing activities. With the implementation of mitigation, if needed, impacts to cultural resources would be less than significant.

Mitigation Measures

Mitigation Measure CUL-1

In the event archaeological resources are encountered during any ground-disturbing activities associated with the Project, all ground-disturbing work at the location, plus a reasonable buffer zone, must be immediately suspended. The approving County department shall be contacted, and a qualified professional archaeologist retained to analyze the significance of the find and formulate further mitigation (e.g., Project relocation, excavation plan, and protective cover) in consultation with culturally affiliated tribes or other descendant groups, where applicable.

Mitigation Measure CUL-2

Pursuant to California Health and Safety Code §7050.5, if known or suspected Native American or other human remains are encountered, all ground-disturbing work must cease in the vicinity of the discovery, and the County Coroner contacted. The respectful treatment and disposition of remains and associated grave offerings shall be in accordance with PRC §5097.98. The applicant and successors in interest are ultimately responsible for ensuring compliance with this condition.

Mitigation Measure CUL-3

In the event the Project design changes, and ground disturbance is anticipated beyond the APE as it is currently defined, further surveys shall be conducted in those new areas to assess the presence of cultural resources. Any newly discovered or previously recorded cultural resources within the additional survey areas shall be recorded (or updated) on appropriate DPR 523-series forms. If avoidance of these resources is not feasible, then an evaluation and/or data recovery program shall be drafted and implemented.

1.6 ENERGY

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

Discussion

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

No impact. Project development consumes energy primarily in two ways: (1) construction activities consume energy through the operation of heavy off-road equipment, trucks, and worker traffic, and (2) operation of new facilities would consume energy from electricity and propane gas consumption, energy used for water conveyance, and vehicle operations to and from the project site.

In this case, the project would construct a new solar array and battery storage facility. Energy consumption would be limited to what is required to construct the project. Once in operation, the project would generate electrical energy. Energy would be consumed during periodic maintenance trips to the site; however, no impact to energy consumption would occur.

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

No impact. Many of the state and federal regulations regarding energy efficiency are focused on increasing building efficiency and renewable energy generation, as well as reducing water consumption and Vehicles Miles Traveled. The proposed project would generate electrical energy for sale into the PG&E grid. The project would support state and local plans for renewable energy and energy efficiency. No impact would occur under this threshold.

1.7 GEOLOGY AND SOILS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. Geology and Soils.				
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey 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, as updated), creating substantial direct or indirect risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

Discussion

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 California Geological Survey Special Publication 42.)

Less than significant impact. No known active faults are underlying, or adjacent to, the project site. The Cleveland Hill fault is the only active fault zone in Butte County identified in the most recent Alquist-Priolo Earthquake Fault Zoning Map. The Cleveland Hill fault is located east of Dunstone Drive and Miners Ranch Road, between North Honcut Creek and Mt. Ida Road, approximately 4± miles southeast of the City of Oroville and 5± miles northwest of the site. While a fault is located in the general project area, it does not traverse the project site. The likelihood of a surface rupture at the project site is very low and would not be a design or operational consideration for the project.

ii) Strong seismic ground shaking?

Less than significant impact. Ground shaking at the project site could occur due to the earthquake potential of the region's active faults. Based on proximity of the Cleveland fault, seismic ground shaking would likely be perceptible at the site.

iii) Seismic-related ground failure, including liquefaction?

Less than significant impact. According to Butte County General Plan 2040, areas that are at risk for liquefaction can be found on the valley floor, especially near the Sacramento and Feather Rivers, and their tributaries, which have a higher potential to contain sandy and silty soils. According to the Butte County (Figure 4-106 Butte County Planning Area – Liquefaction Potential Areas) of the Local Hazard Mitigation Plan (2019), the west and southwest areas of Butte County are most susceptible to liquefaction. The project area is outside areas identified as High and Moderate for liquefaction, and therefore, are not a significant impact. Impacts would be less than significant.

iv) Landslides?

No impact. The project site is rolling topography and no steep slopes are located on the site. As a result, there is no potential for landslide on the project site. No impact would occur under this threshold.

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

Less than significant. According to Figure HS-8 of Butte County General Plan 2040, the project site has a slight potential for soil erosion. Surface soil erosion and loss of topsoil have the potential to occur in any area of the county from disturbances associated with construction-related activities. The proposed action would require minimal ground disturbance to install the equipment. Thus, the project would have a less than significant impact with respect to 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?

No impact. According to Butte County General Plan 2040 (Figure HS-7), the project site is located in an area with a low to moderate potential for landslides. To date, there have been no documented incidents of

subsidence in Butte County. Future operation of the facility would not be exposed to greater potential for liquefaction, lateral spreading and subsidence with implementation of the proposed action.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?

Less than significant impact. According to Figure HS-9 in the Butte County General Plan 2040, the Bangor area has a low potential for expansive soils. Expansive soils are those that have potential to undergo significant changes in volume, either shrinking or swelling, with changes in moisture content. Periodic shrinking and swelling of expansive soils can cause extensive damage to buildings, other structures and roads. Soils of high expansion potential generally occur in the level areas of the Sacramento Valley, including low-lying areas near the town of Bangor. The project would require isolated soil disturbances on the site for installation of the access road, battery storage equipment pad, solar array racking system and fencing. Operation of the project and related improvements are not anticipated to create substantial direct or indirect risks to life or property associated with expansive soils.

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

No impact. The project would not generate wastewater; thus, no septic system would be required. No impact would occur.

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

No impact. No paleontological resources are known to occur on the project site. Grading would be limited to what is required to install the access road, battery storage equipment pad, solar array anchor system and fence posts. No impact to paleontological resources would occur.

1.8 GREENHOUSE GAS EMISSIONS

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

Discussion

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

Less than significant impact. The project would generate greenhouse gas (GHG) emissions during the construction and operation of the telecommunication facility. Construction-related emissions during development may be generated from construction equipment exhaust and construction employee vehicle trips to and from the worksite. Project's construction emissions would occur over a short duration and consist primarily of equipment exhaust emissions. The long-term regional emissions associated with the project would mainly arise from the creation of up to six annual inspection and maintenance trips.

The Butte County Climate Action Plan (CAP) was adopted in February 2014 and updated in December 2021. The Butte County CAP includes strategies and associated actions related to public education and outreach efforts regarding reducing GHG emissions, administrative actions to monitor progress, and encouraging participation in programs. The strategies either apply to existing buildings that have already completed the environmental analysis, address operational characteristics of the county, or encourage options for actions that would reduce GHG emissions.

The project is allowed in the AG-20 zone with approval of a UP; thus, construction activities and operations are consistent with the Butte County General Plan. GHG emissions associated with the build-out of the project site have been analyzed and mitigated with the adoption of the Butte County CAP and the continued implementation of its strategies. Electricity consumed during construction is provided primarily by the area service provider regulated by state renewable energy plans. Vehicles used during construction, and generated by the project's operations, would conform to state regulations and plans regarding fuel efficiency. Operation of the project would generate electrical energy. Therefore, the project would not generate substantial GHG emissions, either directly or indirectly, significantly impacting the environment. Impacts are 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. The project's consistency with the Butte County General Plan would ensure compliance with the GHG emission reduction strategies in the Butte County CAP, which in turn, support County-wide efforts to meet statewide GHG emission reduction goals. Therefore, impacts would be less than significant.

1.9 HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. Hazards and Hazardous Materials.				
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or 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?	☐	☐	☒	☐

Discussion

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. Limited quantities of miscellaneous hazardous substances, such as gasoline, diesel fuel, hydraulic fluid, solvents, oils, etc. would be used to maintain vehicles and motorized equipment during construction-related activities during development of the project. Accidental spill of any of these substances could impact water and/or groundwater quality. Depending on the relative hazard of the material, if a spill were to occur of significant quantity, the accidental release could pose a hazard to construction workers, the public, as well as the environment. Construction personnel who are experienced in containing accidental

releases of hazardous materials will be present to contain and treat affected areas in the event a spill occurs. If a larger spill were to occur, construction personnel would generally be on-hand to contact the appropriate agencies.

It is not anticipated that large quantities of hazardous materials would be permanently stored or used within the project site. Chemicals, if any, would be comprised of cleaners, paints, solvents and other common items. These materials would not be present in sufficient strength or quantity to create a substantial risk of fire or explosion, or otherwise pose a substantial risk to human or environmental health.

The Battery Energy Storage System (BESS) proposed for use on the project site would be comprised of rechargeable lithium-ion batteries that can store energy generated by the solar arrays and discharge it into the electrical grid when needed. The battery units are in weather-proof storage containers that are placed on concrete pads with a fenced area and connected to the solar arrays via switching equipment that monitors the recharge and discharge cycles for each battery. Thermal management of the battery is managed by the heating, ventilation, and air conditioning (HVAC) system that controls the environmental temperature and humidity. The battery units are not considered hazardous and ongoing monitoring and management of each unit would avoid overcharging, overheating or other operational issues that could impact the efficiency of the system. There is no potential for the release of hazardous materials associated with use of the BESS. Further, batteries typically have a useful life of 5 to 15 years and are recycled when the life cycle is depleted. No routine transport or disposal of hazardous materials would be associated with the solar arrays or on-site BESS.

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

Less than significant impact. The project would not emit hazardous emissions or handle hazardous materials. Publicly available hazardous materials (e.g., paint, maintenance supplies) may be required for maintenance and cleaning. These materials are not used in sufficient strength or quantity to create a substantial risk of fire or explosion, or otherwise pose a substantial risk to human or environmental health. Operation of the solar generating facility would not create a permanent significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials.

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

No impact. Bangor Elementary School is located approximately 1,000 feet southwest of the lease area. As stated, the site will not emit hazardous emissions or handle hazardous or acutely hazardous waste. Thus, no impact would occur. As stated, the battery units are not considered hazardous and ongoing monitoring and management of each unit would avoid overcharging, overheating or other operational issues that could impact the efficiency of the system. There is no potential for the release of hazardous materials associated within proximity to 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 §65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No impact. A review of regulatory agency databases, which included lists of hazardous materials sites compiled pursuant to California Government Code Section 65962.5, show no reported cases of contamination on or proximal to the lease area. The nearest report case was a leaking underground storage tank (LUST) site associated with Bangor Grocery located approximately 1,100 feet southwest of the lease area. The case was closed March 20, 2008.

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. No public use airports have been identified to be located within two miles of the project site. The closest public use airport is Oroville Municipal Airport, located approximately 13 miles northwest of the project site. The proposed project is located outside the compatibility zones for the area airports, and therefore, would not result in impacts to people residing on, or visiting, the project site.

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

No impact. The proposed project would construct a new access road located along the western property boundary. Emergency access to the site would be provided by this road. Emergency access would not be affected. The project would not include any actions that physically interfere with emergency response or emergency evacuation plans. Up to six annual inspection/maintenance trips would be required; however, that would result in a negligible change to overall volumes on La Porte Road. No impact would occur under this threshold.

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

Less than significant impact. The project is located in a high fire hazard area as designated by the State Department of Forestry and Fire Protection. The project site is not within a State Responsibility Area (SRA); thus, Butte County has fiscal responsibility for preventing and suppressing fires. The nearest staffed fire station is Butte County Fire Station #55, located at 7540 Oro Bangor Highway approximately 1,200 feet southwest of the lease area. The proposed action would not expose people or structures to a significant risk or loss, injury or death involving wildland fires. A less than significant impact would occur under this threshold.

1.10 HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. Hydrology and Water Quality.				
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater 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 on- or offsite erosion or siltation;	☐	☐	☐	☒
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☐	☒
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☐	☒
iv) Impede or redirect flood flows?	☐	☐	☐	☒
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

Discussion

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

Less than significant impact. The proposed action would not generate wastewater or otherwise change the quality or volume of water exiting the site. Thus, no impact to water quality standards and related discharge requirements would occur with the project. Site development would require grading, excavation and general site preparation activities, which would disturb soils; thus, increasing the potential for soil erosion during precipitation or high wind events. Erosion of on-site soils may temporarily impact surface water quality and water quality within nearby waterways. Downstream impacts from erosion may include increased turbidity and

suspended sediment concentrations in waterways. Because one or more acre of land disturbance would be required, construction activities associated with project development would be subject to the National Pollutant Discharge Elimination System (NPDES) General Construction Activities Storm Water permit program. This program requires implementation of erosion control measures during and immediately after construction that are designed to avoid significant erosion during the construction period. In addition, the project operation would be subject to State Water Resources Control Board requirements for the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) to control pollution in stormwater runoff from the project site, including excessive erosion and sedimentation. The SWPPP must be prepared and approved prior to any soil disturbance activities. Implementation of standard erosion control BMPs during future construction-related activities, together with adherence to State requirements regarding grading activities, would ensure that potential erosion impacts are less than significant. A less than significant impact would occur under this threshold.

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

No impact. The Sacramento Valley Groundwater Basin supplies a portion of the municipal and agricultural water demands for the City of Oroville and surrounding unincorporated areas. The project site is located over the Sacramento Valley Groundwater Basin which underlies the majority of eastern Butte County including the Bangor area.

According to the Butte County Groundwater Management Plan (2005), groundwater supplies approximately 31% of potable water demand county-wide. Water demand for the unincorporated areas of the county was projected to grow from 8,322.3 million gallons in 2000 to 9,736.4 million gallons in 2030, an increase of 17 percent. As noted, a private well currently supplies domestic water. No additional water demand would be associated with implementation of the proposed project.

The net increase in impervious surfaces relative to existing conditions would consist of the battery storage pad. Precipitation would run off the solar panels and percolate into the soil as under existing conditions, as would all water on the gravel access road. Further, no water service would be required. The proposed action would not cause a change in surface infiltration or a decrease in the percolation of water into the underlying aquifers. As shown in Figure 2-7 of the Butte County Groundwater Plan, the project site is not located in a groundwater recharge area for the Sacramento Valley Groundwater Basin. No impacts to groundwater supplies and recharge would occur.

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 on- or offsite erosion or siltation;

No impact. The proposed action would have no effect on erosion or siltation occurring on- or off-site. With the exception of grading required to create the access road and battery storage pads, no changes to the landform or drainage patterns would occur and minimal ground disturbance would be required. See response to 1.10 (a) above. The project would not alter the course of a stream or river. No impact would occur under this threshold.

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

No impact. The proposed action would result in a negligible increase in impervious surface area from construction of new facilities. The existing drainage patterns on-site would not be affected. Storm

water would percolate into the existing soil surrounding the lease area. The project would not result in on- or off-site flooding. Impacts would be less than significant.

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

No impact. Stormwater drainage systems in the project area currently consist of natural drainage courses, roadside ditches and culverts that capture surface runoff, which ultimately infiltrate into the underground aquifer or conveyed to area waterways. Precipitation that falls on vacant land percolates into the soil. As stated, the project would not increase runoff from impervious surfaces or otherwise affect the ability of existing on-site stormwater detention to accommodate stormflows. No impacts would occur under this threshold.

iv) Impede or redirect flood flows?

No impact. The project site is located within Flood Zone X (FEMA Flood Insurance Rate Map No. 06007C1025E, January 6, 2011). Properties within Flood Zone X are outside a floodplain; and thus, not susceptible to flooding. As referenced, the project would not redirect on-site drainage patterns or impede or redirect flood flows. All on-site drainage would be managed to ensure existing flows off-site are maintained. The project would not expose people or structures to flood hazard from severe storm events. No impact would occur under this threshold.

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

Less than significant. The project site is located within Flood Zone X (FEMA Flood Insurance Rate Map No. 06007C1025E, January 6, 2011). The project is not located within a flood plain; and thus, would not redirect on-site drainage patterns or impede or redirect flood flows on or surrounding the site. The project would not expose people or structures to flood hazard from severe storm events. Per the General Plan Health and Safety Element Figure HS-5, the Bangor area is not located within a dam inundation zone. The lease area is located proximal to and south of Wilson Creek, an ephemeral stream that bisects the property southwest to northeast. It would not be affected if a dam failure were to occur. The project site is not located in an area that would be impacted by a seiche, tsunami, or mudflows. Because the site is not located proximal to a dam inundation zone, no impact would occur.

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

No impact. The project site is located outside the Butte County Groundwater Management Plan area and Sacramento River Valley Groundwater Basin. No water service is required for operation of the project. The project would not affect groundwater demand or recharge. No impact would occur under this threshold.

1.11 LAND USE AND PLANNING

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

Environmental Setting

The General Plan Update represents the basic community values, ideals and aspirations with respect to land use, development, transportation, public services, and conservation policy that will govern Butte County through 2040. The land use element of the general plan designates the land use of areas within the County and includes a description of the characteristics and intensity of each land use category. The land use designation for the project site is Agriculture (AG) and located in the Bangor community of unincorporated Butte County.

Butte County Zoning Ordinance

The Zoning Ordinance implements the goals and policies of the Butte County General Plan by regulating the uses of the land and structures within the County. The zoning designations of the project site and their intended use are as follows:

Agriculture (AG)

The purpose of the AG zone is to support, protect, and maintain a viable, long-term agricultural sector in Butte County. Standards for the AG zone maintain the vitality of the agricultural sector by retaining parcel sizes necessary to sustain viable agricultural operations, protecting agricultural practices and activities by minimizing land-use conflicts, and protecting agricultural resources by regulating land uses and development intensities in agricultural areas. Permitted uses include crop cultivation, animal grazing, stock ponds, and agricultural processing. More intensive agricultural activities, such as animal processing, dairies, hog farms, stables, forestry and logging, and mining and oil extraction, are permitted with the approval of a Conditional Use Permit. One (1) single-family home and one (1) accessory dwelling unit are permitted on each legally established parcel within the AG zone, and residential uses for agricultural employees are permitted as an accessory use within the AG zone. The minimum permitted parcel size in the AG zone ranges from twenty (20) acres to one hundred sixty (160) acres. The AG zone implements the Agriculture land use designation in the General Plan.

Use Permit

As stated, the proposed action is subject to approval of a Use Permit. The finding associated with approval of a conditional Use Permit application are as follows:

Butte County Code §24-217 (Conditional Use Permit - Findings)

A. The proposed use is allowed in the applicable zone and consistent with the General Plan.

B. The location, size, design, and operating characteristics of the proposed use will be compatible with the existing and future land uses in the vicinity of the subject property.

C. The proposed use will not be detrimental to the public health, safety, and welfare of the County.

D. The proposed use is properly located within the County and adequately served by existing or planned services and infrastructure.

E. The size, shape, and other physical characteristics of the subject property are adequate to ensure compatibility of the proposed use with the existing and future land uses in the vicinity of the subject property.

F. The proposed project would have no significant or adverse environmental impacts.

Discussion

a) Physically divide an established community?

No impact. The subject property is a 17-acre project area within an 82-acre parcel. The proposed action would allow the installation of solar arrays, battery storage, fencing and access road. The project would not require any changes to an existing facility. No structures would be removed nor would neighboring parcels be affected by the project. The project would not divide an established community.

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

No impact. The project is deemed consistent if the proposed use is consistent with the applicable General Plan designation and text, the applicable General Plan is legally adequate and internally consistent, and the anticipated types of activities are appropriate to the land use designated for the area. The proposed project does not include an amendment to the existing land use designation and would be consistent with the zoning designation provided a UP is approved. The proposed project is a request for a UP, consistent with Section 24-217 of the Butte County Zoning Ordinance. Implementation of the project would not result in a conflict with zoning ordinances because the project is conditionally allowed use in the AG-20 zone with the approval of a UP. The project will not generate any inconsistencies with applicable zoning standards and General Plan policies.

1.12 MINERAL RESOURCES

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

Discussion

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

No impact. The majority of Butte County's sand and gravel deposits occur in two regions, along the Sacramento River and within a band running from north to south down the center of the county. There are no known economically viable sources of rock materials in the immediate vicinity of the project site and no mining has occurred on the project site or surrounding area. Approval of the proposed action would not preclude future extraction of available mineral resources. No impact would occur under this threshold.

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

No impact. The project site is not within or near any designated locally-important mineral resource recovery site. The access road would be covered in gravel; and thus, require the use of mineral resources. However, the project would not result in the loss of availability of a locally important mineral resource recovery site. No impact would occur under this threshold.

1.13 NOISE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII.Noise.				
Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?	☐	☒	☐	☐
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?	☐	☐	☐	☒

Environmental Setting

According to the Butte County General Plan 2040, noise is a concern throughout Butte County, but especially in rural areas and in the vicinity of noise-sensitive uses such as residences, schools, and churches. Noise is discussed in the Health and Safety Chapter of the Butte County General Plan 2040. Tables HS-2 and HS-3 in the County General Plan (included as Tables 1.13-1 and 1.13-2 below) outline the maximum allowable noise levels at sensitive receptor land uses.

Table 1.13-1. Maximum Allowable Noise Exposure Transportation Noise Sources

	Exterior Noise Level Standard for Outdoor Activity Areas[a]		Interior Noise Level Standard	
LAND USE	L_{dn}/CNEL, dB	L_{eq}, dBA[b]	L_{dn}/CNEL, dB	L_{eq}, dBA[b]
Residential	60[c]	-	45	-
Transient Lodging	60[c]	-	45	-
Hospitals, nursing homes	60[c]	-	45	-
Theaters, auditoriums, music halls	-	-	-	35
Churches, meeting halls	60[c]	-	-	40
Office Buildings	-	-	-	45
Schools, libraries, museums	-	70	-	45
Playgrounds, neighborhood parks	-	70	-	-

Source: Table HS-2, Butte County General Plan 2040

[a] Where the location of outdoor activity areas is unknown, the exterior noise-level standard shall be applied to the property line of the receiving land use.

[b] As determined for a typical worst-case hour during periods of use.

[c] Where it is not possible to reduce noise in outdoor activity areas to 60 dB Ldn/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB Ldn/CNEL may be allowed, provided that available exterior noise-level reduction measures have been implemented and interior noise levels are in compliance with this table.

Table 1.13-2. Maximum Allowable Noise Exposure Non-Transportation Noise Sources

	Daytime 7 am - 7 pm		Evening 7 pm - 10 pm		Night 10 pm - 7 am	
NOISE LEVEL DESCRIPTION	Urban	Non-Urban	Urban	Non-Urban	Urban	Non-Urban
Hourly Leq (dB)	55	50	50	45	45	40
Maximum Level (dB)	70	60	60	55	55	50

Source: Table HS-3, Butte County General Plan 2040

Notes:

1. "Non-Urban designations" are Agriculture, Timber Mountain, Resource Conservation, Foothill Residential and Rural Residential. All other designations are considered "urban designations" for the purposes of regulating noise exposure.

2. Each of the noise levels specified above shall be lowered by 5 dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g. caretaker dwellings).

3. The County can impose noise level standards which are up to 5 dB less than those specified above based upon determination of existing low ambient noise levels in the vicinity of the project site.

4. In urban areas, the exterior noise level standard shall be applied to the property line of the receiving property. In rural areas, the exterior noise level standard shall be applied at a point 100 feet away from the residence. The above standards shall be measured only on property containing a noise sensitive land use. This measurement standard may be amended to provide for measurement at the boundary of a recorded noise easement between all affected property owners and approved by the County.

Table 1.13.1, above, identifies the maximum allowable noise exposure to a variety of land uses from transportation sources, including from roadways, rail and airports. Table 1.13-2 identifies the maximum allowable noise exposure from non-transportation sources. In the case of transportation noise sources, exterior noise level standards for residential outdoor activity areas are 60 dB (Ldn/CNEL). However, where it is not possible to reduce noise in an outdoor activity area to 60 dB Ldn /CNEL or less using a practical application of the best-available noise-reduction measures, an exterior noise level of up to 65 dB may be allowed, provided that available exterior noise-level reduction measures have been implemented and interior noise levels are in compliance with applicable standards.

Butte County Noise Ordinance

Chapter 41A, Noise Control, of the Butte County Code of Ordinance applies to the regulation of noise. The purpose of the noise ordinance is to protect the public welfare by limiting unnecessary, excessive, and unreasonable noise. Section 41A-7 specifies the exterior noise limits that apply to land use zones within the County, which are provided in Table 1.13-2.

The Butte County Noise Ordinance provides the County with a means of assessing complaints of alleged noise violations and to address noise level violations from stationary sources. The ordinance includes a list of activities that are exempt from the provisions of the ordinance. Relevant information related to the exterior and interior noise limits set out by the Butte County Noise Ordinance are included below.

Chapter 41A-9 Exemptions

The following are exempted activities identified in Chapter 41A-9 that are applicable to the proposed project:

(f) Noise sources associated with construction, repair, remodeling, demolition, paving or grading of any real property or public works project located within one thousand (1,000) feet of residential uses, provided said activities do not take place between the following hours:

- Sunset to sunrise on weekdays and non-holidays;
- Friday commencing at 6:00 p.m. through and including 8:00 a.m. on Saturday, as well as not before 8:00 a.m. on holidays;
- Saturday commencing at 6:00 p.m. through and including 10:00 a.m. on Sunday; and,
- Sunday after the hour of 6:00 p.m.

Provided, however, when an unforeseen or unavoidable condition occurs during a construction project and the nature of the project necessitates that work in process be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work into the hours delineated above and to operate machinery and equipment necessary to complete the specific work in progress until that specific work can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner;

(g) Noise sources associated with agricultural and timber management operations in zones permitting agricultural and timber management uses;

(h) All mechanical devices, apparatus or equipment which are utilized for the protection or salvage of agricultural crops during periods of adverse weather conditions or when the use of mobile noise sources is necessary for pest control;

(i) Noise sources associated with maintenance of residential area property, provided said activities take place between 7:00 a.m. to sunset on any day except Saturday, Sunday, or a holiday, or between the hours of 9:00 a.m. and 5:00 p.m. on Saturday, Sunday, or a holiday; and, provided machinery is fitted with correctly functioning sound suppression equipment;

Chapter 41A-8 Butte County Interior Noise Standards

Interior noise standards discussed in Chapter 41A apply to all noise sensitive interior area within Butte County. The maximum allowable interior noise level standards for residential uses is 45 dB Ldn/CNEL, which is designed for sleep and speech protection. The typical structural attenuation of a residence from an exterior noise is 15 dBA when windows facing the noise source is open. When windows in good condition are closed, the noise attenuation factor is around 20 dBA for an older structure and 25 dBA for a newer dwelling constructed consistent with Title 24 of the California Energy Code.

Table 1.13-3. Maximum Allowable Interior Noise Standards

NOISE LEVEL DESCRIPTION	Daytime 7 am - 7 pm	Evening 7 pm - 10 pm	Nighttime 10 pm - 7 am
Hourly L_{eq} (dB)	45	40	35
Maximum Level (dB)	60	55	50
Source: Butte County Code Chapter 41A-8, Interior Noise Standards			

Discussion

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 in other applicable local, state, or federal standards?

Less than significant impact with mitigation. A noise and vibration technical analysis memorandum for the project was prepared by Dudek on January 25, 2024. The memorandum presented quantitative estimates of the project's onsite construction and post-construction operational noise emissions, and vibration impacts to the surrounding sound environment, which consists of existing residential land uses.

Construction noise emissions associated with the proposed project would generate short-term construction noise during site preparation and grading activities. While it may be audible at neighboring residences, construction noise is temporary and exempt from regulation per Chapter 41A-9 of the Butte County Code provided it occurs within the hours stipulated.

Post-construction operation-related noise associated with the solar arrays is predicted to comply with the County noise standards for non-urban areas 50 dBA L_{eq} from 7 a.m. to 7 p.m.), evening (45 dBA L_{eq} from 7 p.m. to 10 p.m.), and nighttime (40 dBA L_{eq} from 10 p.m. to 7 a.m.). However, the Battery Energy Storage System (BESS) has cooling systems and inverter components that manufacture noise emissions, which are predicted to potentially impact the residence at 5774 La Porte Road, located approximately 20-feet south of the project site boundary and 140 feet south of the BESS area, during nighttime hours. Implementation of a 6-foot-tall perimeter noise barrier surrounding the BESS equipment would reduce the predicted noise levels at the residence to below the County's 40 dBA hourly Leq nighttime noise threshold. Should a 6-foot-tall wall not be feasible to implement as part of the project design, or a shorter wall design is selected, the applicant may apply noise reduction technology on or in the vicinity of the BESS. Such equipment may include acoustically-lined vent shrouds, passive attenuators, etc. that are commonly used on HVAC systems, generators, and other electrical equipment. Implementation of **Mitigation Measure NOI-1** would reduce potential noise impacts to a less than significant level.

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

No impact. The proposed action would require minor grading and excavation to accommodate installation of the access road, solar array racking system and battery storage equipment. The nearest sensitive properties are located approximately 350 south of the southern lease area boundary. Construction would not require pile driving, blasting or other high impact construction methods; thus, no temporary or permanent sources of groundborne vibration proximal to an existing receiver would occur. Post-construction, the project would not generate vibration.

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 Oroville Municipal Airport is located approximately 13 miles northwest of the site. As referenced, the project site is located outside the Airport Influence Area. Thus, while aircraft overflights would be audible at the project site, the project would not expose people to excessive noise levels from a public use airport or private airstrip. No impact would occur under this threshold.

Mitigation Measure

Mitigation Measure NOI-1

To reduce the impact from BESS components during operation to below the County's 40 dBA hourly Leq nighttime noise threshold, the applicant shall construct a 6-foot-tall wall along the south, north, and west boundaries of the BESS area, with the east boundary used for the gated entrance. In the event the 6-foot-tall wall is infeasible to implement, the applicant may use alternative means of noise reduction including shortening the wall height and offsetting the resulting drop in the wall's noise reduction ability with the application of noise reduction technology applied directly on or in the vicinity of the BESS equipment. Such noise reduction technology may include acoustically-lined vent shrouds, passive attenuators, etc., that are commonly used on HVAC systems, generators, and other electrical equipment.

Within 60 days of project implementation, an acoustical engineer approved by the County shall monitor the actual noise emissions from the project over a minimum 24-hour period to verify compliance with County noise thresholds and shall report their findings to the County. If noise emissions exceed County thresholds, the acoustical engineer will provide feasible recommendations to reduce noise levels to below thresholds, which the applicant shall implement to the satisfaction of Butte County. The applicant shall provide a monetary retainer in the amount of $5,000 to the County prior to the issuance of building permits to ensure completion of noise monitoring.

1.14 POPULATION AND HOUSING

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

Discussion

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

No impact. The project would construct a new solar array, access road, battery storage equipment and related improvements on a 17-acre project area within an 82-acre parcel. The project would not increase population through the construction of new homes or businesses. The project would connect to existing PG&E electrical infrastructure. The access road would be used exclusively for the project. It would not indirectly induce unplanned population growth.

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

No impact. The proposed lease area is part of a vacant agricultural parcel. It would not result in the loss of housing or cause an increase in the local population. No existing residents would be displaced; thus, necessitating the construction of additional housing.

1.15 PUBLIC SERVICES

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

Discussion

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

Fire protection?

No impact. The project is located in a high fire hazard area as designated by the State Department of Forestry and Fire Protection. The project site is within a State Responsibility Area (SRA), which means that the California Department of Forestry and Fire Protection (CalFire) has fiscal responsibility for preventing and suppressing fires. The nearest staffed fire station is Butte County Fire Station #55, located at 7540 Oro Bangor Highway, approximately 1,200 feet southwest of the lease area. The proposed project would be an unmanned solar generating facility. It would not increase demand for fire protection.

Police protection?

No impact. The Butte County Sheriff's Office (BCSO) provides law enforcement service to the site from the headquarters located in the City of Oroville. The BCSO also maintains a mutual aid agreement with the Chico and Oroville Police Departments. Implementation of the proposed project is unlikely to increase service calls when development occurs. The project would not require any new law enforcement facilities or the alteration of existing facilities to maintain acceptable performance objectives. No increase in demand for law enforcement is anticipated. No impact would occur under this threshold.

Schools?

No impact. The proposed action would allow construction of a new solar array, access road, battery storage and related equipment. It would not affect demand for school facilities in the area. No impact would occur under this threshold.

Parks?

No impact. Approval of the project would allow construction of a solar array, access road, battery storage and related equipment. The project would not affect demand for existing local and regional park facilities. No impact would occur under this threshold.

Other public facilities?

No impact. Development of the project would generate electricity. Site-specific improvements would not cause any adverse project impacts or otherwise increase demand for County services such as fire protection, road maintenance, law enforcement, schools, recreation and libraries.

1.16 RECREATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. Recreation.				
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) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒

Discussion

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?

No impact. Approval of the project would allow construction of a solar array, access road, battery storage and related equipment. The project would not affect recreational resources. No impact would occur under this threshold.

b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

No impact. Approval of the project would allow construction of a solar array, access road, battery storage and related equipment. The project would not include recreational facilities nor would it require the expansion of existing recreational facilities. The project would not result in any adverse physical effects on the environment from construction or expansion of recreational facilities. No impact would occur under this threshold.

1.17 TRANSPORTATION

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

Discussion

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

Less than significant impact. Approval of the project would allow construction of a solar array, access road, battery storage and related equipment. Up to six annual trips would be generated for inspection and maintenance. Operation of La Porte Road would not be affected by the project. Impacts would be less than significant.

There are no existing designated pedestrian or bicycle transportation facilities located near the project site. La Porte Road from Lower Honcut Road to Oro Bangor Highway is a planned Class 2 bicycle route in the adopted *2011 Butte County Bicycle Plan*. Development of the project would not affect this segment of La Porte Road or otherwise impact alternative transportation facilities.

b) Conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

Less than significant impact. The proposed project would require up to six monitoring/maintenance trips annually. The increase in vehicle miles traveled would be negligible and, thus, would be consistent with CEQA Guidelines Section 15064.3, subdivision (b). A less than significant impact would occur under this threshold.

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 would construct a new access road from La Porte Road. The apron at the intersection would be paved. The road would be 12 feet in width and covered with gravel. use the existing access driveway located along the eastern property boundary with an extension to the lease area. However, it would not change the configuration (alignment) of area roadways and would not introduce types of vehicles that would result in dangerous conditions on area roads.

d) Result in inadequate emergency access?

No impact. The project site would be accessed via an existing private access road from La Porte Road. The road would be designed per Butte County standards and will accommodate emergency vehicles if needed. No impact to emergency access would occur with approval of the proposed action.

1.18 TRIBAL CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. Tribal Cultural Resources.				
Has a California Native American Tribe requested consultation in accordance with Public Resources Code section 21080.3.1(b)?	☐ Yes			☒ No
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	☐	☐	☐	☒
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☐	☐	☒

Environmental Setting

Tribal Cultural Resources are defined as a site feature, place, cultural landscape, sacred place or object, which is of cultural value to a Tribe and is either on or eligible for the California Historic Register, a local register, or a resource that the lead agency, at its discretion, chooses to treat as such (Public Resources Code Section 21074 (a)(1)).

Butte County contains a rich diversity of archaeological, prehistoric and historical resources. The General Plan 2040 EIR observes that the "archaeological sensitivity of Butte County is generally considered high, particularly in areas near water sources or on terraces along water courses" (Butte County General Plan EIR, 2010, p. 4.5-7).

A substantial adverse change upon a historically significant resource would be one wherein the resource is demolished or materially altered so that it no longer conveys its historic or cultural significance in such a way that justifies its inclusion in the California Register of Historical Resources or such a local register (CEQA Guidelines Section 15064.5, sub. (b)(2)). Cultural resources include prehistoric and historic period archaeological sites; historical features, such as rock walls, water ditches and flumes, and cemeteries; and architectural features. Cultural resources consist of any human-made site, object (i.e., artifact), or feature that defines and illuminates our past. Often such sites are found in

foothill areas, areas with high bluffs, rock outcroppings, areas overlooking deer migratory corridors, or near bodies of water.

Per Assembly Bill AB 52 (Statutes of 2014) letters were sent to the Paskenta Band of Nomlaki Indians, the Mooretown Rancheria, and the Mechoopda Indian Tribe of Chico Rancheria. A response letter dated October 13, 2023, was received from the Moretown Rancheria stating they are not aware of any resources on the site.

Discussion

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

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

No impact. The proposed action would be constructed within an existing disturbed agricultural property that part of an 82-acre agricultural parcel. Grading and excavation would be limited to what is needed to install the access road, solar panel racking system and battery storage equipment. As stated in Section 1.5, *Cultural Resources*, the eight historic resources discovered on-site are recommended as ineligible for listing under any criteria for the NRHP and CRHP. Therefore, the impact is considered less than significant, and no mitigation is required.

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

No impact. As detailed in response to Checklist Question 1.5b, no proposed construction or ground-disturbing activities are expected to result in impacts to known historic or cultural resources. No known features exist on the property, including objects, sites, or landscapes, that could be considered as having cultural value to California Native American tribes, or eligible for listing in the California Register of Historic Resources. Mitigation Measures CUL-1, CUL-2 and CUL-3 would reduce potential impacts to tribal cultural resources to less than significant.

1.19 UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIX. Utilities and Service Systems.				
Would the project:				
a) Require or result in the relocation or construction of construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☒
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	☒
c) Result in a determination by the wastewater treatment provider that 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?	☐	☐	☐	☒

Environmental Setting

Solid Waste

Most municipal wastes are hauled to the Neal Road Recycling and Waste Facility, which is owned by Butte County and managed by the Butte County Department of Public Works. The Neal Road Facility is located at 1023 Neal Road, one mile east from State Highway 99, and seven miles southeast of Chico, on 190 acres owned by Butte County. The Neal Road Facility is permitted to accept municipal solid waste, inert industrial waste, demolition materials, special wastes containing nonfriable asbestos, and septage. Hazardous wastes, including friable asbestos, are not accepted at the Neal Road Facility or any other Butte County disposal facility, and must be transported to a Class I landfill permitted to receive untreated hazardous waste. The landfill has a design capacity of 25,271,900 cubic yards and is permitted to accept 1,500 tons per day; however, the average daily disposal into the landfill is approximately 466 tons. As of November 2017, the remaining capacity of the Neal Road Facility is approximately 15,449,172 cubic yards, which would give the landfill a service life to the year 2048 (Neal Road Recycling & Waste Facility, 2017).

Discussion

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

No impact. The project site is currently served by electric power (PG&E) and wireless phone service. No domestic wastewater or water service is required; no septic system or water infrastructure is needed. The project would require an intertie to the existing PG&E grid. The project would not result in the relocation or construction of new or expanded infrastructure including water services, wastewater treatment stormwater drainage or natural gas. The project would be a new solar generating facility.

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

No impact. No domestic water would be required for the project. No impact would occur.

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

No impact. No domestic wastewater service would be required. No impact would occur.

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. Operations would not generate solid waste that would require disposal at the Neal Road Recycling and Waste Facility. As stated, the Neal Road Facility has a maximum permitted throughput of 1,500 tons per day, and an estimated current daily average throughput of 466 tons per day. Facility capacity would not be affected by operation of the proposed project.

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

No impact. The proposed project would comply with statutes and regulations related to solid waste. As stated, the project would not generate solid waste. No impact would occur.

1.20 WILDFIRE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. Wildfire.				
Is the project located in or near state responsibility areas or lands classified as high fire hazard severity zones?		☒ Yes		☐ No
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 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?	☐	☐	☐	☒

Environmental Setting

The project site is designated as a high fire hazard by the State Department of Forestry and Fire Protection. The project site is located within a designated State Responsibility Area (SRA); thus, Cal Fire has fiscal responsibility for preventing and suppressing any potential wildfires. The nearest staffed fire station is Butte County Fire Station #55 located 1,200 feet southwest of the lease area. The project site is subject to the Butte County Fire Prevention and Protection Ordinance, which among other requirements, sets forth requirements to create certain fire breaks, clear hazardous vegetation, and maintain defensible space around buildings on adjacent parcels.

Discussion

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

No impact. The project would require construction of a new solar array, access road, battery storage facility and related equipment. In the vicinity of the project site, La Porte Road is designated as an emergency travel route by the Butte County Office of Emergency Management (See https://www.buttecounty.net/795/Community-Evacuation-Maps). Following construction, the project will be remotely operated and field visits would typically consist of one person per visit for a total of six trips per year, which would not impair emergency evacuations.

No lane closures on La Porte Road or other project-related actions would create restrictions affecting emergency access or interfere with an emergency evacuation plan. No impact would occur under this threshold.

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

No impact. The project site is located on a 17-acre lease area within an 82-acre agricultural property in the Bangor area of unincorporated Butte County. The lease area is generally flat though the property is comprised of rolling terrain. No conditions or factors have been identified in the project area that would exacerbate wildfire risks. No impact would occur under this threshold.

c) Require the installation 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?

Less than significant impact. As described in the project's Vegetation Management Plan (Kleinfelder, July 2023), the project will use vegetation control methods to maintain fire breaks and reduce fire hazards associated with the project. Specifically, fire breaks will be maintained within 10 feet (horizontal) of either side of the access road and 14 feet (vertical) above the access road; within 10 feet (horizontal and vertical) of utility poles, battery storage, and arrays; within 20 feet of La Porte Road; and within 100 feet of existing structures. Vegetation control methods will include mechanical measures such as mowing, grazing, and pruning, with hours restrictions and additional equipment provided to crews during fire season, and use of herbicides in accordance with current state, local, and manufacturer's guidelines and regulations. The project's Operations and Maintenance Plan (Renewable Properties, June 2023) provides that through continuous remote monitoring and scheduled field visits, the project's O&M contractor will ensure that all equipment is maintained in proper order and will remain in coordination with Butte County Fire Department, local law enforcement and utility providers. No off-site infrastructure improvements are needed to address fire or emergency access requirements. The existing driveway and extension to the lease area would accommodate emergency vehicles , and Butte County Fire Department has conditionally approved the proposed layout for purposes of emergency vehicle access (Correspondence with Fire Captain-Deputy Fire Marshal Chris Boyd, September 26, 2023). Through implementation of the Vegetation Management Plan and Operations and Maintenance Plan, no substantial increase in the risk of wildland fires would occur with the approval of the project. Project impacts are less than significant under this threshold.

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

No impact. According to Butte County General Plan 2040 (Figure HS-7), the project site is located in an area with a low to moderate potential for landslides (see discussion Section 1.7.a – Geology Soils). Based on site conditions, no impacts from post-fire instability or drainage changes have been identified. No impact would occur under this threshold.

1.21 MANDATORY FINDINGS OF SIGNIFICANCE

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

Discussion

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 an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?

Less than significant. Potential impacts to biological resources and cultural resources associated with future project development were analyzed in this Initial Study. All direct, indirect, and cumulative impacts were determined to be less than significant with implementation of Mitigation Measures BIO-1, BIO-2, BIO-3 and BIO-4. No special status species or their habitat was identified on the site. Development of the project would not cause fish or wildlife populations to drop below self-sustaining levels or restrict the movement/distribution of a rare or endangered species.

Development would not affect known significant historic resources or known archaeological or paleontological resources. There are no known unique ethnic or cultural values associated with the project site, nor are known religious or sacred uses associated with the project site. Limited excavation would be required to construct the access road, solar panel racking system, battery storage infrastructure and related improvements. With implementation of Mitigation Measures CUL-1, CUL-2 and CUL-3, if needed, impact to cultural and paleontological resources would be less than significant.

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

Less than significant. The project would have no impact, less than significant impact or less than significant impact with mitigation with respect to all environmental issues pursuant to CEQA. Due to the limited scope of direct physical impacts to the environment associated with the project, potential impacts would be project-specific.

The cumulative effects resulting from build out of the Butte County General Plan 2040 were previously identified in the General Plan Update Program EIR. The type, scale, and location of the type of activity proposed would be consistent with the County's General Plan and zoning designation with approval of a UP and is compatible with existing development on-site and adjacent single-family residential and agricultural uses. Because of this consistency, the potential cumulative environmental effects of the proposed project would fall within the impacts identified in the County's General Plan EIR.

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

Less than significant. There have been no impacts discovered through the review of this application demonstrating that approval of the UP application and implementation of the proposed action would cause substantial adverse effects to human beings either directly or indirectly. As stated, Mitigation Measure AIR-1 would reduce fugitive dust emissions. Mitigation Measures BIO-1, BIO-2, BIO-3, CUL-1, CUL-2 and CUL-3 would reduce any potential impacts to biological and cultural resources to less than significant.

Authority for the Environmental Checklist: Public Resources Code Sections 21083, 21083.5.

Reference: Government Code Sections 65088.4.
Public Resources Code Sections 21080, 21083.5, 21095; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

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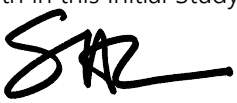
APPENDIX - A

Mitigation Monitoring and Reporting Program

Project Sponsor(s) Incorporation of Mitigation into Proposed Project

I/We have reviewed the Initial Study for the La Porte Road Solar + Battery Energy Storage Use Permit (UP23-0005) application and particularly the mitigation measures identified herein. I/We hereby modify the applications on file with the Butte County Planning Department to include and incorporate all mitigations set forth in this Initial Study.



_____ 2/5/24

Project Sponsor/Project Agent Date

_____ _____

Project Sponsor/Project Agent Date

MITIGATION MONITORING AND REPORTING PROGRAM

In accordance with the California Environmental Quality Act (CEQA), Butte County (County) prepared a Mitigated Negative Declaration (MND) that identifies adverse impacts related to the La Porte Road Solar + Battery Energy Storage Use Permit (Project). The MND also identifies mitigation measures that would reduce or eliminate these impacts.

Section 21081.6 of the California Public Resources Code (PRC) (§ 15091(d) and 15097 of the State CEQA Guidelines) requires public agencies "to adopt a reporting and monitoring program for changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment." A mitigation monitoring and reporting program (MMRP) is required for the Project because the MND for the project identified potentially significant adverse impacts related to construction and implementation activities, and mitigation measures have been identified to mitigate those impacts.

PURPOSE OF MITIGATION MONITORING AND REPORTING PROGRAM

This MMRP has been prepared to ensure that all required mitigation measures are implemented and completed according to schedule and maintained satisfactorily during project implementation as adopted by the County, as required. The MMRP may be modified by the County during Project implementation, as necessary, in response to changing conditions or other refinements. The attached Mitigation Monitoring and Reporting table has been prepared to assist the responsible parties in implementing and documenting required mitigation measures. The table identifies individual mitigation measures, implementation timing/schedule, responsible person/agency for implementing the measure, implementation, and verification action, and provides space to confirm implementation of the mitigation measures. The numbering of mitigation measures follows the numbering sequence of the MND.

ROLES AND RESPONSIBILITIES

Unless otherwise specified herein, the County is ultimately responsible for ensuring that mitigation measures are implemented according to the specifications provided for each measure and for demonstrating that the action has been successfully completed. At its discretion, the County may delegate implementation responsibility or portions thereof to a licensed contractor or professional. In most instances, the applicant is responsible for funding and implementing the measures.

The County will be responsible for the overall administration of the MMRP and for

verifying that County staff and/or the construction contractor has completed the necessary actions for each measure. The County will designate a project manager to oversee the MMRP during construction. The County project manager is responsible for the following duties:

- Ensure that routine inspections of the project site are conducted by appropriate County staff; check plans, reports, and other documents required by the MMRP; and conduct report activities.
- Serve as a liaison between the County and the site manager regarding mitigation monitoring issues.
- Complete forms and maintain reports and other records and documents generated by the MMRP.
- Coordinate and ensure corrective actions or enforcement measures are taken, if necessary.

MITIGATION MONITORING PLAN TABLE

The column categories identified in the MMRP table are described below:

- **Mitigation Measure**: This column lists the mitigation measures by number and provides the text of the mitigation measures identified in the MND.
- **Timing/Schedule**: This column lists the time frame in which the mitigation will take place.
- **Implementation Responsible Party**: This column identifies the party responsible for complying with the requirements of the mitigation measure.
- **Monitoring Responsible Party**: This column identifies the party responsible for verifying the implementation of mitigation actions.
- **Date Completed/Name of County Staff Verifying Completion**: This column is to be dated and signed by the County project manager or their designee based on the documentation provided by the applicant, its agents (qualified individuals), and/or through visual inspection.

LA PORTE ROAD SOLAR + BATTERY ENERGY STORAGE USE PERMIT (UP23-0005) - MITIGATION MONITORING AND REPORTING TABLE

Mitigation Measures	Timing/Schedule	Implementation Responsible Party	Monitoring Responsible Party	Date Completed/Name of County Staff Verifying Completion
AIR QUALITY				
Mitigation Measure AIR-1 (Particular Matter, TAC, and Fugitive Dust Emissions): The following best practice measures to reduce impacts to air quality shall be incorporated by the project applicant, subject property owners, or third-party contractors during construction activities on the project site. These measures are intended to reduce criteria air pollutants that may originate from the site during the course of land clearing and other construction operations. <u>Diesel PM Exhaust from Construction Equipment and Commercial On-Road Vehicles Greater than 10,000 Pounds</u> • All on- and off-road equipment shall not idle for more than five minutes. Signs shall be posted in the designated queuing areas and/or job sites to remind drivers and operators of the five-minute idling limit. • Idling, staging and queuing of diesel equipment within 1,000 feet of sensitive receptors is prohibited. • All construction equipment shall be maintained in proper tune according to the manufacturer's specifications. Equipment must be checked by a certified mechanic and determined to be running in proper condition before the start of work.	Prior to construction activities During construction activities	Applicant	Butte County Butte County Air Quality Management District	

Mitigation Measures	Timing/Schedule	Implementation Responsible Party	Monitoring Responsible Party	Date Completed/Name of County Staff Verifying Completion
• Install diesel particulate filters or implement other CARB-verified diesel emission control strategies. • Shall not operate a diesel-fueled auxiliary power system (APS) to power a heater, air conditioner, or any ancillary equipment on that vehicle during sleeping or resting in a sleeper berth for greater than 5 minutes at any location when within 100 feet of restricted areas. • To the extent feasible, truck trips shall be scheduled during non-peak hours to reduce peak hour emissions. <u>Operational TAC Emissions</u> • All mobile and stationary Toxic Air Contaminants (TACs) sources shall comply with applicable Airborne Toxic Control Measures (ATCMs) promulgated by the CARB throughout the life of the project. • Stationary sources shall comply with applicable District rules and regulations. <u>Fugitive Dust</u> Construction activities can generate fugitive dust that can be a nuisance to local residents and businesses near a construction site. Dust complaints could result in a violation of the District's "Nuisance" and "Fugitive Dust" Rules 200 and 205, respectively. The following is a list of				

Mitigation Measures	Timing/Schedule	Implementation Responsible Party	Monitoring Responsible Party	Date Completed/Name of County Staff Verifying Completion
measures that may be required throughout the duration of the construction activities: • Reduce the amount of the disturbed area where possible. • Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. An adequate water supply source must be identified. Increased watering frequency would be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water should be used whenever possible. • All dirt stockpile areas should be sprayed daily as needed, covered, or a District-approved alternative method will be used. • Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible following completion of any soil disturbing activities. • Exposed ground areas that will be reworked at dates greater than one month after initial grading should be sown with a fast-germinating non-invasive grass seed and watered until vegetation is established. • All disturbed soil areas not subject to re-vegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in				

Mitigation Measures	Timing/Schedule	Implementation Responsible Party	Monitoring Responsible Party	Date Completed/Name of County Staff Verifying Completion
advance by the Butte County Air Quality Management District. • All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used. • Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site. • All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with local regulations. • Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site. • Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water should be used where feasible. • Post a sign in prominent location visible to the public with the telephone numbers of the contractor and the Butte County Air Quality				

Mitigation Measures	Timing/Schedule	Implementation Responsible Party	Monitoring Responsible Party	Date Completed/Name of County Staff Verifying Completion
Management District - (530) 332-9400 for any questions or concerns about dust from the project. All fugitive dust mitigation measures required shall be shown on grading and building plans. In addition, the contractor or builder should designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend period when work may not be in progress. The name and telephone number of such persons shall be provided to the District prior to land use clearance for map recordation and finished grading of the area. Please note that violations of District Regulations are enforceable under the provisions of California Health and Safety Code Section 42400, which provides for civil or criminal penalties of up to $25,000 per violation.				
BIOLOGICAL RESOURCES				
Mitigation Measure BIO-1 (Bird Species Protected Under the MBTA): Preconstruction Nesting Bird Survey. All native birds in California are protected by the federal Migratory Bird Treaty Act (MBTA), and Section 3503.5 of the California Fish and Game Code specifically protects raptors. Ground disturbance, noise, or removal of vegetation that would result in destruction of active bird nests or disruption of breeding/nesting activity could be a violation of the MBTA and the California Fish and Game Code, as well as a	No more than seven (7) days prior to all site preparation and construction activities during nesting season (March 1 – August 31)	Applicant/ qualified biologist	Butte County Planning Division California Department of Fish and Wildlife	

Mitigation Measures	Timing/Schedule	Implementation Responsible Party	Monitoring Responsible Party	Date Completed/Name of County Staff Verifying Completion
significant impact under CEQA. Nesting bird surveys shall be conducted by a qualified avian biologist no more than seven (7) days prior to any construction, vegetation clearing, or ground disturbance activities during the nesting season (March 1 – August 31) to determine if any native birds are nesting on or near the site (including a 150-foot buffer for raptors). Preconstruction surveys shall focus on both direct and indirect evidence of nesting, including nest locations and nesting behavior. The qualified avian biologist will make every effort to avoid potential nest predation as a result of survey and monitoring efforts. If active nests are found during the preconstruction nesting bird surveys, a Nesting Bird Plan (NBP) shall be prepared and implemented by the qualified avian biologist. At a minimum, the NBP shall include guidelines for addressing active nests, establishing buffers, ongoing monitoring, the establishment of avoidance and minimization measures, and reporting. The size and location of all buffer zones, if required, shall be based on the nesting species, individual/pair's behavior, nesting stage, nest location, its sensitivity to disturbance, and intensity and duration of the disturbance activity.				
Mitigation Measure BIO-2 (Special Status Species & Native Nesting Birds): Trash Receptacles. Impacts to special-status species and native nesting birds due to increased predation from construction activities could be considered a significant impact in the context of CEQA. All trash and waste items generated by construction or crew activities shall be	During all site preparation and construction activities.	Applicant/ qualified biologist	Butte County Planning Division California Department of Fish and Wildlife	

Mitigation Measures	Timing/Schedule	Implementation Responsible Party	Monitoring Responsible Party	Date Completed/Name of County Staff Verifying Completion
properly contained in a covered trash receptacle and removed from the Project Site daily. This includes biodegradable items, such as apple cores and banana peels, that attract predators, such as raccoons and American crows that could prey upon sensitive wildlife species.				
Mitigation Measure BIO-3 (Special-Status Species): Common Wildlife Awareness. All Project personnel will visually check for animals in any pipes, culverts, or other open-ended materials and equipment stored on-site for one or more overnight periods prior to moving, burying, or capping to ensure that no animals are present within the materials and equipment. To prevent accidental entrapment of wildlife during construction, all excavated holes, ditches, or trenches greater than six (6) inches deep will be covered at the end of each workday by suitable materials that cannot be displaced or escape ramps will be placed in excavations. After opening and before filling holes, ditches, and trenches, the areas will be thoroughly inspected for trapped animals.	During all site preparation and construction activities	Applicant/ qualified biologist	Butte County Planning Division California Department of Fish and Wildlife	
Mitigation Measure BIO-4 (Oak Woodland): Prior to initiating any land clearing, grading, or other construction activities, a protective fence of chain link or high visibility plastic mesh fencing shall be placed five feet beyond the established critical root zone (CRZ) of the tree or group of trees being protected within 100 feet of work areas under the approval of a qualified professional. Warning signs shall be prominently displayed on each	prior to any development activity or, the issuance of any grading, building, septic, or well permit, or the approval of any improvement plans on the parcels.	Applicant/ qualified biologist	Butte County Planning Division	

Mitigation Measures	Timing/Schedule	Implementation Responsible Party	Monitoring Responsible Party	Date Completed/Name of County Staff Verifying Completion
fence to ensure avoidance of protected trees. The signs shall be a minimum of 16 x 24 inches, brightly colored, and clearly visible from the ground and from vehicles. The signs must clearly indicate that the CRZ is a restricted area. The fencing shall remain in place until a final inspection by a qualified professional. The CRZ is defined as the radius in feet equal to the inches of a tree's DBH (with an 8-foot minimum distance for trees with DBH of 5-8"). Activities prohibited within the CRZ include: 1) Grade changes (2) Drainage changes 3) The severing of roots over 2" in diameter (unless done with approval from a qualified professional) 4) Heavy equipment use, vehicular traffic, parking of vehicles 5) The use of tree trunks as winch support, anchorage, as a temporary power pole, signpost or other similar function 6) Storage or dumping of construction materials, waste, or tools. Trenching, pipe or conduit installation within the CRZ must either be cut by hand, air spade, by mechanically boring a tunnel under the roots with a horizontal directional drill (hydraulic or pneumatic air excavation) or any other method approved by a qualified professional (Certified Arborist). Tunneling under a root system can greatly reduce damage to the tree as well as minimize the cost of replacing landscaping or other features. Tunneling may be restricted by sloped areas or rocky soils. Once the pipe or conduit has been installed, the tunnel should be backfilled with excavated soil, and the disturbed area should be irrigated the same day.				

Mitigation Measures	Timing/Schedule	Implementation Responsible Party	Monitoring Responsible Party	Date Completed/Name of County Staff Verifying Completion
If driving over these areas is unavoidable, tires should be deflated slightly to redistribute the weight over a larger area. If repeated crossings are required, up to six inches of mulch should be placed over the CRZ to prevent compaction. The mulch material shall be composed of two-inch untreated wood chip mulch or an approved equal per the qualified professional. Plywood can also be used to construct a temporary crossing bridge that distributes vehicle weight over the CRZ. The contractor shall consult with a qualified professional to determine the best mitigation method and to review soil compaction mitigations before beginning construction. If a tree or group of trees is adjacent to or in immediate proximity to a grade slope of 8% (23 degrees) or more, then erosion control or silt barriers shall be installed outside the CRZ to prevent siltation and/or erosion within the CRZ. Erosion and sedimentation control barriers shall be installed or maintained in a manner which does not result in soil build-up within tree drip lines or CRZs. The project contractor, consultant, or manager will collaborate with a qualified professional to verify, in writing, that all pre-construction oak woodlands preservation conditions have been met as follows: 1. Tree fencing has been installed around any trees or tree areas that are to be preserved. 2. Erosion control has been secured on trees or tree areas that are to be preserved. 3. Tree pruning has been completed, if necessary.				

Mitigation Measures	Timing/Schedule	Implementation Responsible Party	Monitoring Responsible Party	Date Completed/Name of County Staff Verifying Completion
4. Preventative measures for soil compaction have been installed. 5. A tree maintenance schedule has been established, if needed. Written verification of the above conditions must be submitted to and approved by the Department of Development Services prior to the removal of oak trees. Contractors or employees who will be interacting with trees or operating within the CRZ must attend a pre-construction meeting with a qualified professional. The meeting will be intended to ensure that all involved parties are aware of the tree protection measures and procedures that will be employed. The meeting will also review procedures, tree protections, hauling routes, staging areas, and any other procedures deemed important by a qualified professional.				
CULTURAL RESOURCES				

Mitigation Measures	Timing/Schedule	Implementation Responsible Party	Monitoring Responsible Party	Date Completed/Name of County Staff Verifying Completion
Mitigation Measure CUL-1 (Inadvertent Discovery : In the event archaeological resources are encountered during any ground-disturbing activities associated with the Project, all ground-disturbing work at the location, plus a reasonable buffer zone, must be immediately suspended. The approving County department shall be contacted, and a qualified professional archaeologist retained to analyze the significance of the find and formulate further mitigation (e.g., Project relocation, excavation plan, and protective cover) in consultation with culturally affiliated tribes or other descendant groups, where applicable.	During ground disturbance and excavation activities	Applicant/ qualified archaeologist	Butte County Planning Division California Register of Historic Resources, Office of Historic Preservation	
Mitigation Measure CUL-2 (Human Remains Discovery): Pursuant to California Health and Safety Code §7050.5, if known or suspected Native American or other human remains are encountered, all ground-disturbing work must cease in the vicinity of the discovery, and the County Coroner contacted. The respectful treatment and disposition of remains and associated grave offerings shall be in accordance with PRC §5097.98. The applicant and successors in interest are ultimately responsible for ensuring compliance with this condition.	During ground disturbance and excavation activities	Applicant/ qualified archaeologist	Butte County Planning Division County Coroner Native American Heritage Commission	
Mitigation Measure CUL-3 (Resource Reporting): In the event the Project design changes, and ground disturbance is anticipated beyond the APE as it is currently defined, further surveys shall be conducted in those new areas to assess the presence of cultural resources. Any	Before and during construction activities	Applicant/ qualified archaeologist	Butte County Planning Division California Register of Historic	

Mitigation Measures	Timing/Schedule	Implementation Responsible Party	Monitoring Responsible Party	Date Completed/Name of County Staff Verifying Completion
newly discovered or previously recorded cultural resources within the additional survey areas shall be recorded (or updated) on appropriate DPR 523-series forms. If avoidance of these resources is not feasible, then an evaluation and/or data recovery program shall be drafted and implemented.			Resources, Office of Historic Preservation	
NOISE				
Mitigation Measure NOI-1 (Ambient Noise Levels): To reduce the impact from BESS components during operation to below the County's 40 dBA hourly Leq nighttime noise threshold, the applicant shall construct a 6-foot-tall wall along the south, north, and west boundaries of the BESS area, with the east boundary used for the gated entrance. In the event the 6-foot-tall wall is infeasible to implement, the applicant may use alternative means of noise reduction, including shortening the wall height and offsetting the resulting drop in the wall's noise reduction ability with the application of noise reduction technology applied directly on or in the vicinity of the BESS equipment. Such noise reduction technology may include acoustically-lined vent shrouds, passive attenuators, etc., that are commonly used on HVAC systems, generators, and other electrical equipment. Within 60 days of project implementation, an acoustical engineer approved by the County shall monitor the actual noise emissions from the project over a minimum 24-hour period to verify compliance with County noise thresholds and shall report their findings to the County. If noise	Prior to building permit approval. Noise monitoring to be conducted within 60 days of BESS operations.	Applicant	Butte County Planning Division	

Mitigation Measures	Timing/Schedule	Implementation Responsible Party	Monitoring Responsible Party	Date Completed/Name of County Staff Verifying Completion
emissions exceed County thresholds, the acoustical engineer will provide feasible recommendations to reduce noise levels to below thresholds, which the applicant shall implement to the satisfaction of Butte County. The applicant shall provide a monetary retainer in the amount of $5,000 to the County prior to the issuance of building permits to ensure completion of noise monitoring.				

APPENDIX - B

Biological Resources Assessment December 2023

LA PORTE ROAD SOLAR PROJECT, BIOLOGICAL RESOURCES ASSESSMENT

BUTTE COUNTY, CALIFORNIA

DECEMBER 2023

ONLY THE CLIENT OR ITS DESIGNATED REPRESENTATIVES MAY USE THIS DOCUMENT AND ONLY FOR THE SPECIFIC PROJECT FOR WHICH THIS REPORT WAS PREPARED.

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La Porte Road Solar Project
Biological Resources Assessment
Butte County, California

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December 2023
Kleinfelder Project No. 20232542.001A

TABLE OF CONTENTS

SUMMARY

The proposed La Porte Road Solar Project (Project) is a small-scale utility solar generating and energy storage project located in the unincorporated community of Bangor, in Butte County, California (Figure 1). In September of 2022 and May of 2023, Kleinfelder biologists conducted a desktop review of the vicinity of the Project area and performed a field verification survey. In addition, a Kleinfelder botanist performed a rare plant survey on May 23, 2023. The intent of these surveys was to identify and characterize existing biological resources, to the extent possible, and determine the potential for special-status species and/or sensitive habitats (as defined by state and federal resource agencies) to occur.

The field survey focused on the approximate 17-acre Project Area (the area inside of the proposed fenceline and the proposed access road); however, a larger footprint was surveyed to incorporate habitats that may support special-status species, including the Project Area and all other areas within the subject parcel south of Wilson Creek and west of a wetland seep on the east side of the parcel, regarded in this document as the "study area". Based on the results of the desktop review and field verification survey, no special-status wildlife species and no special-status plant species were determined to have a moderate or greater potential to occur within the study area.

This report serves to document the methods and results of the September 2022 and May 2023 biological field surveys, describes potential biological resource constraints associated with construction of a solar facility at the site, and provides recommendations to address these constraints. This assessment does not provide a comprehensive impact analysis; however, the recommendations provided could be integrated into subsequent environmental documentation to ensure compliance with the California Environmental Quality Act (CEQA).

1 INTRODUCTION

1.1 BACKGROUND AND PROJECT DESCRIPTION

The La Porte Road Solar Project is a small-scale utility solar generation project located on approximately 17 acres of an 82-acre parcel located just northeast of the community of Bangor in unincorporated Butte County. The Project is located at 5864 La Porte Road (APN 028-240-061). RPCA Solar 11, LLC has entered into a long-term lease agreement with the property owner (Ross W. McGowan Trust) to facilitate the development of a small-scale, solar energy generating facility.

The Project will generate a total of 3.0 megawatts (MW) alternating current (AC) (4.2 MW direct current [DC]) of clean, reliable solar energy when complete. The Project will interconnect to Pacific Gas and Electric's (PG&E's) pre-existing electrical distribution system located on site. The power generated from this facility will be sold to PG&E through a long-term Power Purchase Agreement. Additionally, the Project will be equipped with energy storage technology that will allow on-site renewable energy generation to be stored and dispatched onto the grid when needed.

The Project will utilize approximately 7,182 solar modules and 24 string inverters to convert the sun's energy into usable, AC power. Single-axis tracking technology will be utilized to allow the modules to efficiently track the sun throughout the day and maximize the efficiency of solar collection. The modules will be mounted on a steel racking system, which will be anchored into the ground using driven steel piers. The overall height of the array will be no more than 15-feet tall at maximum tilt.

1.2 OBJECTIVES

The purpose of this analysis is to evaluate the study area to assess the potential for special-status plant and wildlife species and sensitive natural communities to occur, and the potential effects to these biological resources due to construction and operation of the Project. This assessment provides the methods and results of the field survey, including vegetation communities and land cover types present within the study area, special-status plant and wildlife species detected or with potential to occur within the study area, the presence of wildlife movement corridors or federally designated critical habitat within or adjacent to the study area, and any additional focused surveys necessary to further evaluate potential effects to biological resources that could occur within the study area..

1.3 PROJECT LOCATION

The approximate 82-acre parcel is located on the east side of La Porte Road, approximately 0.35-mile northeast of the intersection of Los Verjeles Road and La Porte Road (Figure 2). The parcel is surrounded primarily by rural residential properties where grazing and small-scale agricultural practices are common.

The study area is situated at an elevation of approximately 800-900 feet above mean sea level in the foothills of the Sierra Nevada. No structures are located in the study area; however, a residence is located in the northern portion of the parcel (Figure 2).

The study area is situated within Township 18 North, Range 5 East, and Section 27 of the Bangor 7.5-minute U.S. Geological Survey (USGS) quadrangle. The corresponding latitude and longitude at the approximate center of the study area is 39°23'36.33" north latitude and 121°23'57.49" west longitude.

2 REGULATORY SETTING

2.1 FEDERAL

Federal Endangered Species Act (FESA)

The FESA prohibits the taking, possession, sale or transport of endangered species. Pursuant to the requirements of FESA, a federal agency reviewing a project within its jurisdiction must determine whether any federally listed threatened or endangered species could be present in the project site and determine the extent to which the project will have an effect on such species. In addition, federal agencies are required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under FESA or result in the destruction or adverse modification of critical habitat designated for such species (16 USC 1536[3], [4]). Projects that would result in "take" of any federally-listed threatened or endangered species are required to obtain authorization from the National Marine Fisheries Service (NMFS) and/or U.S. Fish and Wildlife Service (USFWS) through either Section 7 (interagency consultation) or section 10(a) (incidental take permit) of FESA, depending on whether the federal government is involved in permitting or funding the project.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) regulates or prohibits taking, killing, possession of, or harm to migratory bird species listed in Title 50 Code of Federal Regulations (CFR) Section 10.13. The MBTA is an international treaty for the conservation and management of bird species that migrate through more than one country, and is enforced in the United States by the USFWS. Hunting of specific migratory game birds is permitted under the regulations listed in Title 50 CFR 20. The MBTA was amended in 1972 to include protection for migratory birds of prey (raptors).

Federal Clean Water Act (Section 404)

The objective of the Clean Water Act (CWA) is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. Under Section 404 of the CWA, the U.S. Army Corps of Engineers (ACOE) has the authority to regulate activities that could discharge fill or dredge material or otherwise adversely modify wetlands or other waters of the United States. The ACOE implements the federal policy embodied in Executive Order 11990, which, when implemented, is intended to result in no net loss of wetland values or function.

Federal Clean Water Act (Section 401)

The State Water Resources Control Board (SWRCB) has authority over wetlands through Section 401 of the CWA, as well as the Porter-Cologne Act, California Code of Regulations Section 3831(k), and California Wetlands Conservation Policy. The CWA requires that an applicant for a Section 404 permit (to discharge dredged or fill material into waters of the United States) first obtain certification from the appropriate state agency stating that the fill is consistent with the State's water quality standards and criteria. In California, the authority to either grant certification or waive the requirement for permits is delegated by the SWRCB to the nine regional boards. The Regional Water Quality Control Board (RWQCB) has authority for Section 401 compliance in the Project area. A request for certification is submitted to the regional board at the same time that an application is filed with the ACOE.

2.2 STATE

California Endangered Species Act (CESA)

Under the CESA, the California Fish and Wildlife Commission (CFWC) has the responsibility of maintaining a list of threatened species and endangered species. California Department of Fish and Wildlife (CDFW) also maintains lists of species of special concern. A Species of Special Concern (SSC) is a species, subspecies, or distinct population of an animal native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

- is extirpated from the State or, in the case of birds, in its primary seasonal or breeding role;
- is listed as Federally-, but not State-, threatened or endangered;
- meets the State definition of threatened or endangered but has not formally been listed;
- is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status;
- has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for State threatened or endangered status.

CESA prohibits the take of state-listed animals and plants in most cases, but CDFW may issue incidental take permits under special conditions. Pursuant to the requirements of CESA, a state agency reviewing a project within its jurisdiction must determine whether any state-listed endangered or threatened species could be present on the property and determine whether the project would have a potentially significant impact on such species.

California Fish and Game Code Sections 3503, 3511, 3513, 4150

Fish and Game Code Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Fish and Game Code Section 3503.5 protects all birds-of-prey (raptors) and their eggs and nests. Section 3511 states fully protected birds or parts thereof may not be taken or possessed at any time. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the Migratory Bird Treaty Act. All nongame mammals, including bats, are protected by California Fish and Game Code 4150.

California Fish and Game Code Sections 1600-1616

Under Sections 1600-1616 of the California Fish and Game Code, the CDFW regulates activities that would alter the flow, bed, channel, or bank of streams and lakes. The limits of CDFW's jurisdiction are defined in the code as the "… bed, channel or bank of any river, stream, or lake designated by the department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit ..." (Section 1601). In practice, the CDFW usually marks its jurisdictional limit at the top of the stream or bank, or at the outer edge of the riparian vegetation, whichever is wider.

CDFW Wetlands Protection Regulations

CDFW derives its authority to oversee activities that affect wetlands from state legislation. This authority includes Sections 1600-1616 of the Fish and Game Code (lake and streambed alteration agreements), CESA

(protection of state listed species and their habitats - which could include wetlands), and the Keene-Nejedly California Wetlands Preservation Act of 1976 (states a need for an affirmative and sustained public policy program directed at wetlands preservation, restoration, and enhancement). In general, the CDFW asserts authority over wetlands within the state either through review and comment on ACOE Section 404 permits, review and comment on CEQA documents, preservation of state listed species, or through stream and lakebed alteration agreements.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act established the SWRCB and each RWQCB as the principal state agencies responsible for the protection of water quality in California. As noted above, the RWQCB has regulatory authority over the Project area.

The Porter-Cologne Water Quality Control Act provides that, "All discharges of waste into the waters of the State are privileges, not rights." Waters of the State are defined in Section 13050(e) of the Porter-Cologne Water Quality Control Act as "…any surface water or groundwater, including saline waters, within the boundaries of the state." All dischargers are subject to regulation under the Porter Cologne Water Quality Control Act, including both point and nonpoint source dischargers. The RWQCB has the authority to implement water quality protection standards through the issuance of permits for discharges to waters at locations within its jurisdiction. As noted above, the RWQCB is the appointed authority for Section 401 compliance in the Project area.

California Environmental Quality Act

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

3 METHODS

3.1 DESKTOP REVIEW

Special-status plant and wildlife species present or potentially present within the study area were identified through a desktop literature review using the following sources: USFWS Information for Planning and Consultation (IPaC) Trust Resource Report (USFWS 2022a; 2023a); CDFW California Natural Diversity Database (CNDDB) (CDFW 2022; 2023a); and the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Vascular Plants (2022; 2023). Additionally, the Natural Resources Conservation Service (NRCS), Web Soil Survey (WSS) was queried

to determine soil types that exist within the boundary of the study area (USDA 2022), along with the California Essential Habitat Connectivity Project (CDFW 2023b), and the USFWS National Wetland Inventory (NWI) Wetland Mapper tool (USFWS 2022b). The CNDDB and CNPS database searches included the 7.5-minute USGS Bangor quadrangle and the eight surrounding quadrangles (9-quad search). The IPaC search included the study area and a two-mile buffer surrounding the site. Special-status species include those that are considered threatened, endangered, candidate for listing, species of special concern or fully protected by CDFW, or USFWS, or ranked by CNPS. California Rare Plant Rank (CRPR) 1 and 2 plant species were included in the CNPS search. Following a review of these resources, Kleinfelder also reviewed relevant life history information on those species documented as occurring in the region, including habitat type, soils, and elevation preferences.

3.2 Definition of Special-Status Species

Special-status plant and wildlife species with state and/or federal protections as described under FESA or CESA in Section 2 above are specifically defined below.

3.2.1 Special-Status Wildlife Species

Special-status wildlife species include taxa designated as follows:

- Threatened, endangered, or candidate for listing under the FESA
- Threatened, endangered, or rare under the CESA
- CDFW species of special concern or fully protected species

3.2.2 Special-Status Plant Species

Special-status plant species include taxa designated as follows:

- Threatened, endangered, or candidate for listing under the FESA
- Threatened, endangered, or rare under the CESA
- Species with California Rare Plant Ranks (CRPRs) as described below (CNPS 2023):
  - 1A – Plants presumed extinct in California
  - 1B – Plants considered rare, threatened, or endangered in California and elsewhere
  - 2 – Plants considered rare, threatened, or endangered in California, but more common elsewhere

3.3 Field Surveys

A field survey was performed by Kleinfelder biologists Lisa Achter and Bryan Nelson on September 9, 2022, to evaluate botanical and wildlife resources within the study area, including habitat suitability for special-status species. A follow up field survey was performed by Lisa Achter on May 11, 2023, to address comments from the County regarding potential habitat for special-status species in the study area. In addition, Kleinfelder botanist Shane Hanofee performed a floristic botanical survey in the study area on May 23, 2023, to determine the potential presence of Brandegee's clarkia (*Clarkia biloba* ssp. *brandegeeae*) or other rare plants on the site.

The surveys were performed by walking throughout the study area to map and characterize vegetation communities and land cover types, collect data on the relative quality of, and potential for existing habitats to support the special-status species identified during the preliminary database and resources review discussed previously, and to identify

any other sensitive biological resources present or potentially present within the site. An aerial photograph and georeferenced mobile map with an overlay of the study area boundary was utilized to map vegetation communities and record any special-status or sensitive biological resources while in the field. Protocol-level surveys for special-status plant and wildlife species were not conducted during this time. However, any incidental observations of such species were documented during the field survey.

Kleinfelder conducted a constraints-level analysis for potentially jurisdictional wetlands and waters based on current and historic aerial photography signatures and field observations. The analysis was based on criteria provided by the following agencies:

- Waters of the U.S., including wetlands, under the jurisdiction of the ACOE, pursuant to Section 404 of the CWA
- Wetlands and Waters of the State under the jurisdiction of the Regional Water Quality Control Board, pursuant to Section 401 of the CWA and the Porter-Cologne Water Quality Control Act (Porter-Cologne Act)
- Rivers, streams, or lakes under the jurisdiction of CDFW, pursuant to Section 1602 of the CFGC

The May 23, 2023, a floristic botanical survey was conducted by walking transects throughout the study area and identifying every plant taxon to the taxonomic level necessary to determine rarity and listing status. A list of taxa observed during the survey was recorded in a field notebook and is presented in the botanical survey memo (Kleinfelder 2023) and summarized below.

4 RESULTS

4.1 BIOLOGICAL SETTING

The biological setting surrounding the study area is primarily rural residential development and agriculture within gently rolling hills and oak woodland habitat.

4.2 EXISTING HABITATS

The study area is composed primarily of non-native annual grasses and forbs with scattered patches of blue oak (*Quercus douglasii*) woodland. There was evidence of grazing (cow patties) during the September 9, 2022 survey, and the vegetation was 2-8 inches in height. Cows were actively grazing the site during the May 11, 2023 survey; however, the grass was 8-12 inches in height at that time. A discussion of the general characteristics observed within the study area during the field survey are presented below.

4.2.1 SOILS

According to the NRCS (USDA 2022), one soil type, Flanly-Swedesflat, 2 to 15 percent slopes, is present within the study area. Flanly-Swedesflat consists of shallow, well drained soils that formed in residuum from intrusive igneous rocks, mainly quartz diorite. Swedesflat soils are on ridge tops and side slopes on plutons in Sierra Nevada foothills.

4.2.2 VEGETATION COMMUNITIES

Using the classifications described in the online *Manual of California Vegetation* (CNPS 2023b), two vegetation communities, including non-native annual grassland and blue oak (*Quercus douglasii*) woodland, were mapped within the study area (Figure 3). These are described in more detail below.

Non-Native Annual Grassland (41.86 acres). The primary vegetation community mapped within the study area was non-native annual grassland. There was evidence of small mammal activity throughout the site in the form of small burrows (Figure 4). Plant species identified in this vegetation community during the field survey included saltgrass (*Distichlis spicata*), hedgehog dogtail (*Cynosurus echinatus*), medusahead (*Elymus caput-medusae*), yellow star thistle (*Centaurea solstitialis*), stork's bill (*Erodium* sp.), wild oat (*Avena* sp.), trefoil (*Trifolium* sp.), Italian thistle (*Carduus pycnocephalus*), tarweed (*Madia* sp.), little quaking-grass (*Briza minor*), and soft brome (*Bromus hordeaceous*). The Project area is comprised almost exclusively of annual grassland.

Blue Oak Woodland (8.14 acres). This vegetation community was mapped in patches throughout the study area and primarily included blue oak; however, California foothill pine (*Pinus sabiniana*), interior live oak (*Quercus wislizeni*), valley oak (*Quercus lobata*), and California buckeye (*Aesculus californica*) were also observed within this vegetation community.

4.2.3 POTENTIALLY JURISDICTIONAL AQUATIC RESOURCES

Wilson creek, an intermittent stream mapped by the NWI as riverine habitat, flows adjacent to the west-northwestern boundary of the study area (Figure 3). This feature contains flowing water for only part of the year, most likely during the winter and for a period of time after rain events. There is also a small drainage that was mapped in the southwestern portion of the study area. This feature originates in the adjoining parcel south of the subject parcel and flows through the subject parcel where it then connects to Wilson Creek. In addition, four potential seasonal wetlands and three ponds were mapped within the study area during the September 9, 2022, and May 11, 2023, field surveys (Figure 3).

To determine if these features may fall under the jurisdiction of the ACOE and/or RWQCB as waters of the U.S. and/or waters of the State, a formal wetland delineation was performed on November 19, 2022. the methods and results of the formal delineation are included in a separate memo report (Kleinfelder 2022).

4.3 SPECIAL-STATUS SPECIES WITH POTENTIAL TO OCCUR IN THE PROJECT AREA

Special-status plant and wildlife species are discussed below in terms of CEQA thresholds of significance. A threshold of significance for a given environmental impact defines the level of effect above which the lead agency will normally consider impacts to be significant, and below which it will normally consider impacts to be less than significant. Lead agencies are responsible for establishing the thresholds of significance for all documents they prepare. They can rely on several sources, including: Appendix G of the State CEQA Guidelines; CEQA's mandatory findings of significance state CEQA Guidelines § 15065); thresholds established by regulatory agencies; thresholds provided in General Plans or other local planning documents; or thresholds established by other agencies (CEQA 2020).

A list of special-status wildlife species with potential to occur in the vicinity of the Project Area is included in Appendix A, and a list of special-status plant species with potential to occur in the vicinity of the Project Area is included in Appendix B. Definitions regarding potential for species occurrence for this assessment are as follows:

Not expected to occur – Habitat within and adjacent to the Project Area is lacking for the species' life history requirements (foraging, breeding, cover, range, elevation, hydrology, vegetation community, site history, and/or disturbance regime). There are no documented occurrences of the species in the larger vicinity of the Project Area.

Low – Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the Project Area is unsuitable or of poor quality. Because of this, the species is highly unlikely to be found within the Project Area. Any documented occurrences of the species are likely further than possible for the species to disperse to the site, or the date of the occurrence is several decades old, or the vicinity of the Project Area has been developed in a manner that likely precludes the species from presently occurring.

Moderate – Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the Project Area is unsuitable. There are recently documented occurrences in the near vicinity of the Project Area; therefore, the species has a moderate probability of utilizing the Project Area.

High – All of the habitat components meeting the species requirements are present, and/or most of the habitat on or adjacent to the Project Area is highly suitable. There are documented occurrences of the species on or immediately adjacent to the Project Area; therefore, the species has a high probability of utilizing the Project Area.

Present – Species was observed within the Project Area during field surveys or has been recorded (i.e., CNDDB, or other reports) within the Project Area recently.

Based on these definitions, there would be no impact or less than significant impacts to species that are not expected to occur or have a low potential to occur in the Project Area. As such, these species are removed from further consideration and recommendations to avoid impacts to these species are not included in this document. Species with a moderate or greater potential to occur are discussed in Sections 4.3.1 and 4.3.2 below, and recommendations to avoid and minimize impacts to these species are provided in Section 5 of this document.

4.3.1 SPECIAL-STATUS WILDLIFE SPECIES

Results of the CNDDB and IPaC searches indicated 23 special-status wildlife species known to occur within the two-mile/nine-quad search radius of the study area (CDFW 2022a, 2023a; USFWS 2022a, 2023a). However, none of these special-status wildlife species have a moderate or greater potential to occur within the study area due to either 1) a lack of suitable habitat, or 2) the site is outside of the species' known range. As such, none of the 23 special-status wildlife species are discussed further in this document.

To address County comments regarding the potential for foothill yellow-legged frog (*Rana boylii*) to occur in Wilson Creek and California black rail (*Laterallus jamaicensis coturniculus*) to occur in wetlands on the site, senior wildlife biologist Lisa Achter visited the site on May 11, 2023, to perform a focused habitat assessment of Wilson Creek and wetlands in the study area to determine if habitat was present for either species.

Foothill yellow-legged frog inhabits perennial streams and rivers with rocky substrate and open, sunny banks, in forest, chaparral, and woodland habitat. They are sometimes found in isolated pools associated with these features, including

vegetated backwaters, and deep, shaded, spring-fed pools. Because Wilson Creek is an intermittent stream and is heavily vegetated along the banks, this feature would not support foothill yellow-legged frog (i.e., Wilson Creek lacks the habitat requirements to support foothill yellow-legged frog).

California black rail occurs near freshwater marshes along the margins of ponds, lakes, and water impoundments as well as herb dominated wetlands on sloped ground associated with springs, canal leaks, seepage from impoundments and agricultural irrigation. This species requires water depths of about one inch that do not fluctuate during the year and dense vegetation for nesting habitat. The ponds and wetlands that occur in the study area lack the necessary vegetative cover and depth requirements for this species, and therefore would not support California black rail.

4.3.2 Special-Status Plant Species

Results of the IPaC, CNDDB and CNPS searches indicated 17 special-status plant species known to occur within the two-mile/nine-quad search radius of the study area (CNPS 2022, 2023). None of these species have a moderate or greater potential to occur within or adjacent to the study area due to 1) a lack of suitable habitat, 2) a lack of occurrences in the vicinity of the study area, or 3) the study area is outside of the species' known range. As such, none of the 17 special-status plant species are discussed further in this document.

Brandegee's clarkia is a California Rare Plant Rank 4.2 species (CNPS 2023), meaning it has a limited distribution or is infrequent throughout a broader area in California, and the status should be monitored regularly. To address County comments regarding the potential for Brandegee's clarkia to occur in the study area, Kleinfelder conducted a floristic botanical survey on May 23, 2023 (during the blooming period, May-July) to determine the presence/absence of this species in the study area. During the survey, every plant encountered was identified to the species level. No Brandegee's clarkia were detected. A detailed description of the survey methods and results of the floristic botanical survey are included in a separate report (Kleinfelder 2023).

4.4 Critical Habitat

Critical habitat is a term defined and used in the federal Endangered Species Act to specify geographic areas that contain features essential to the conservation of an endangered or threatened species, and that may require special management and protection. Critical habitat may also include areas that are not currently occupied by the species but will be needed for recovery of the species.

The study area does not fall within or adjacent to critical habitat limits for any special-status wildlife or plant species.

4.5 Wildlife Corridors and Habitat Linkages

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

The study area is not recognized as an important wildlife corridor by any regional or state agency or jurisdiction and is not considered critical to the ecological functioning of adjoining open space areas. It likely supports local movement patterns and provides food and cover resources for common wildlife species. Temporary effects due to

noise and increased human activity during project activities would not interfere with these local movement patterns over time or affect the ability of these species to forage or reproduce.

The study area is within mapped mule deer (*Odocolieus hemionus*) wintering range (CDFW 2023b). Long distance migration is rare among large mammals in California; however, mule deer are one of the few that migrate from a summer range to a winter range along known corridors. Summer ranges are typically at high elevations and utilized for fawning areas and nutritious green forage (CDFW 2020). Because these high elevation areas are covered in snow during the winter, deer migrate to lower elevations. At these low elevations, deer are confined to smaller winter ranges where forage is limited, and therefore support deer for a short period of time. The diet of mule deer differs across their range, but high-quality digestible forage is selected where available. High quality forage items consist of young tender shoots, young shrubs, leaves of plants that are high in nutrients, succulent grasses, and forbs. Although deer feed on grasses and forbs in the spring and summer, they are primarily browsers (CDFW 2020).

Within the Project area, high-quality forage is limited for wintering mule deer, as the Project area is dominated by annual grasses and forbs (Figure 4). Wintering mule deer in the vicinity of the Project area are more likely to select young oak tree saplings, acorns, small shrubs, and oak leaves, as these items are readily available in the oak woodland habitat adjacent to the Project area in the winter. In addition, the Project will be fenced in a manner that allows deer to pass through several areas of the arrays to access suitable forage (Figure 2). Because of this, no impacts to wintering mule deer in the vicinity of the Project area are expected due to construction of the Project.

4.6 COMMON WILDLIFE SPECIES

Four common wildlife species, including northern harrier (*Circus hudsonius),* black-tailed jackrabbit *(Lepus californicus),* mourning dove (*Zenaida macroura),* and acorn woodpecker *(Melanerpes formicivorus)* were observed during the field survey. Coyote (*Canis latrans)* scat was also observed.

Common wildlife species adapted to life in proximity to human activity, such as coyote, raccoon (*Procyon lotor)* and striped skunk (*Mephitis mephitis)* are likely to move through the study area on a regular basis to find food and cover. Several common native and non-native bird species are likely to use the study area for nesting and/or foraging, as there is suitable habitat available in the study area for at least part of the year (Figure 4).

5 RECOMMENDATIONS

No special-status plant or wildlife species have a moderate or greater potential to occur in the Project Area. This section provides recommendations to ensure compliance with CEQA and avoid and/or minimize impacts to biological resources in the Project Area during construction.

- **Native Nesting Birds.** All native birds in California are protected by the federal MBTA, and Section 3503.5 of the CFGC specifically protects raptors. Ground disturbance**,** noise, or removal of vegetation that would result in destruction of active bird nests or disruption of breeding/nesting activity could be a violation of the MBTA and the CFGC, and could be considered a significant impact under CEQA.

  Kleinfelder recommends a nesting bird survey be performed by a qualified biologist no earlier than one week prior to any construction during the nesting season (March 1 – August 31) to determine if any native birds are nesting on or near the site (including a 150-foot buffer for raptors). If any active nests are observed during

surveys, a suitable avoidance buffer from the nests should be determined by the qualified biologist based on species, location, and extent and type of planned construction activity. These nests would be avoided until the chicks have fledged and the nests are no longer active, as determined by the qualified biologist. Kleinfelder also recommends removing any suitable nesting habitat (i.e., trees and vegetation) outside of the bird breeding season to avoid impacts to nesting birds.

- **Predation on Sensitive Wildlife Species.** Impacts to special-status species due to increased presence of predators associated with construction activities could be considered a significant impact in the context of CEQA. All trash and waste items generated by construction or crew activities should be properly contained in a covered and locked trash receptacle and/or removed from the Project site daily. This includes biodegradable items, such as apple cores and banana peels, that attract predators such as raccoons and American crows that could prey upon sensitive wildlife species.

  In addition, no firearms or pets should be allowed on the site during construction or Operations and Maintenance activities.

- **Common and Special-Status Wildlife Awareness.** All Project personnel will visually check for animals in any pipes, culverts, or other open-ended materials and equipment stored on site for one or more overnight periods prior to moving, burying, or capping to ensure that no animals are present within the materials and equipment. To prevent accidental entrapment of wildlife during construction, all excavated holes, ditches, or trenches greater than six (6) inches deep will be covered at the end of each workday by suitable materials that cannot be displaced, or escape ramps will be placed in excavations. After opening and before filling, such holes, ditches, and trenches will be thoroughly inspected for trapped animals.

6 REFERENCES CITED

16 U.S.C. 703–712. Migratory Bird Treaty Act, as amended.

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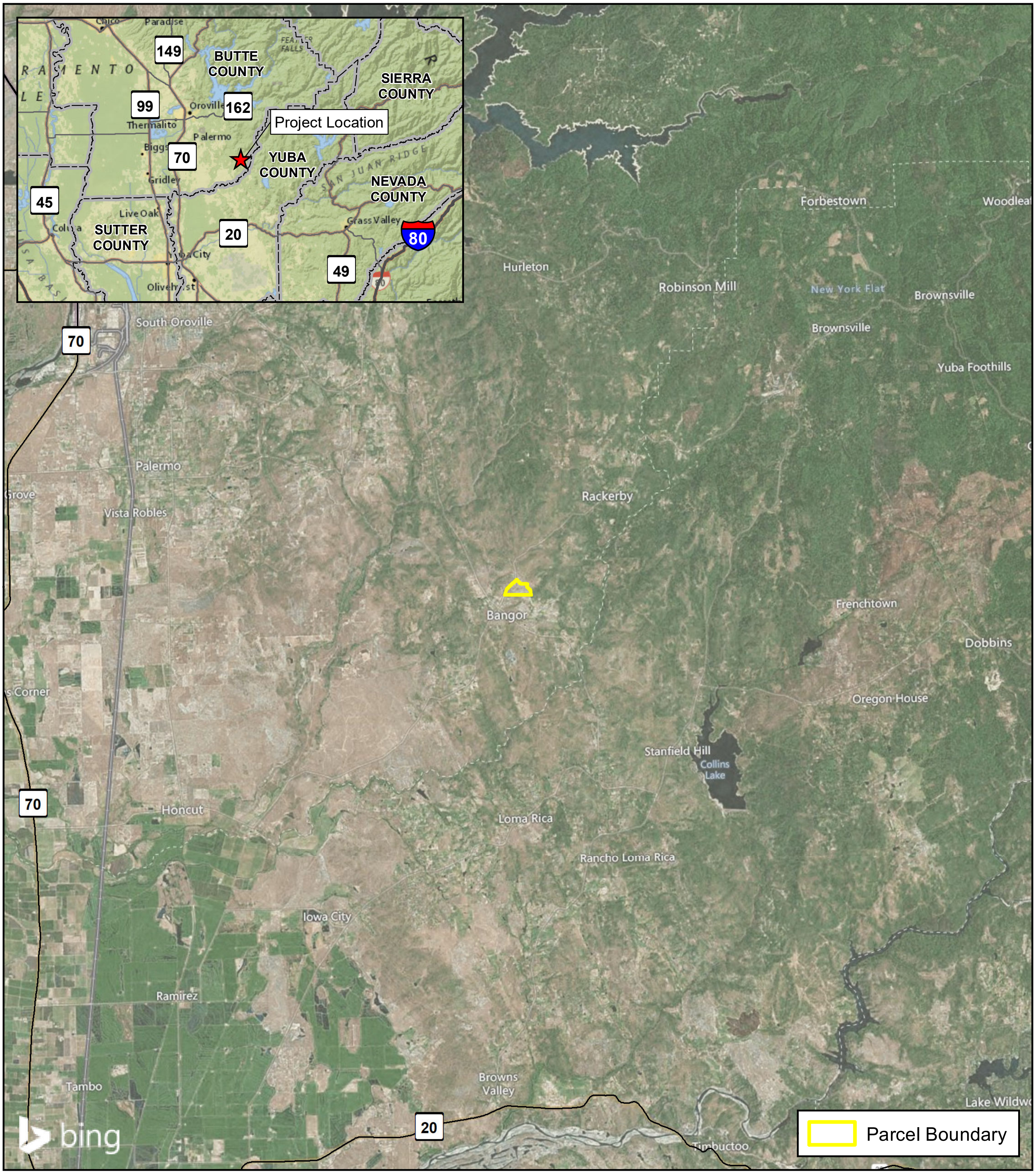


Created By: CBarkerSwitzer Document Path: \\azrgisstorp03\GIS_Projects\Client\GANDA\Renewable_Properties\20232542_RPCA_LaPorte_Solar\Figure1_LaPorte_Solar_RegionalVicinity.mxd

Source: Bing Maps

0 1.5 3 Miles

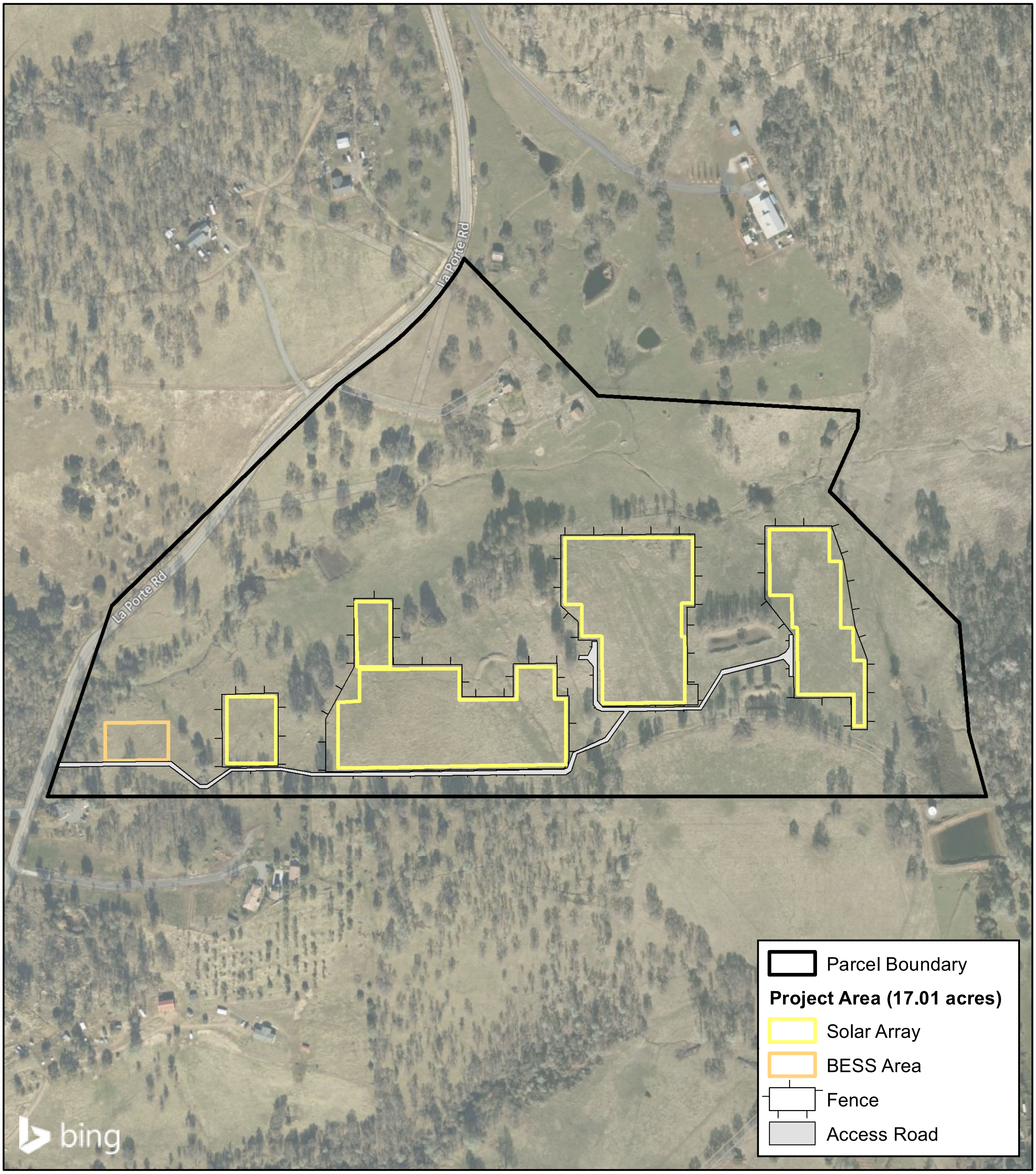
0 2.5 5 Kilometers

N

Scale 1:190,080
1 in = 3 miles

Figure 1. Regional Vicinity
La Porte Road Solar Project
Butte County, California

KLEINFELDER
Bright People. Right Solutions.



USGS 7.5' Quad: BANGOR (1994)
Legal Description: T18N, R05E, SEC 27

0 225 450 Feet
0 75 150 Meters

N

Scale 1:5,400
1 Inch = 450 Feet

Figure 2. Project Area
RPCA La Porte Road Solar Project
Butte County, California

KLEINFELDER
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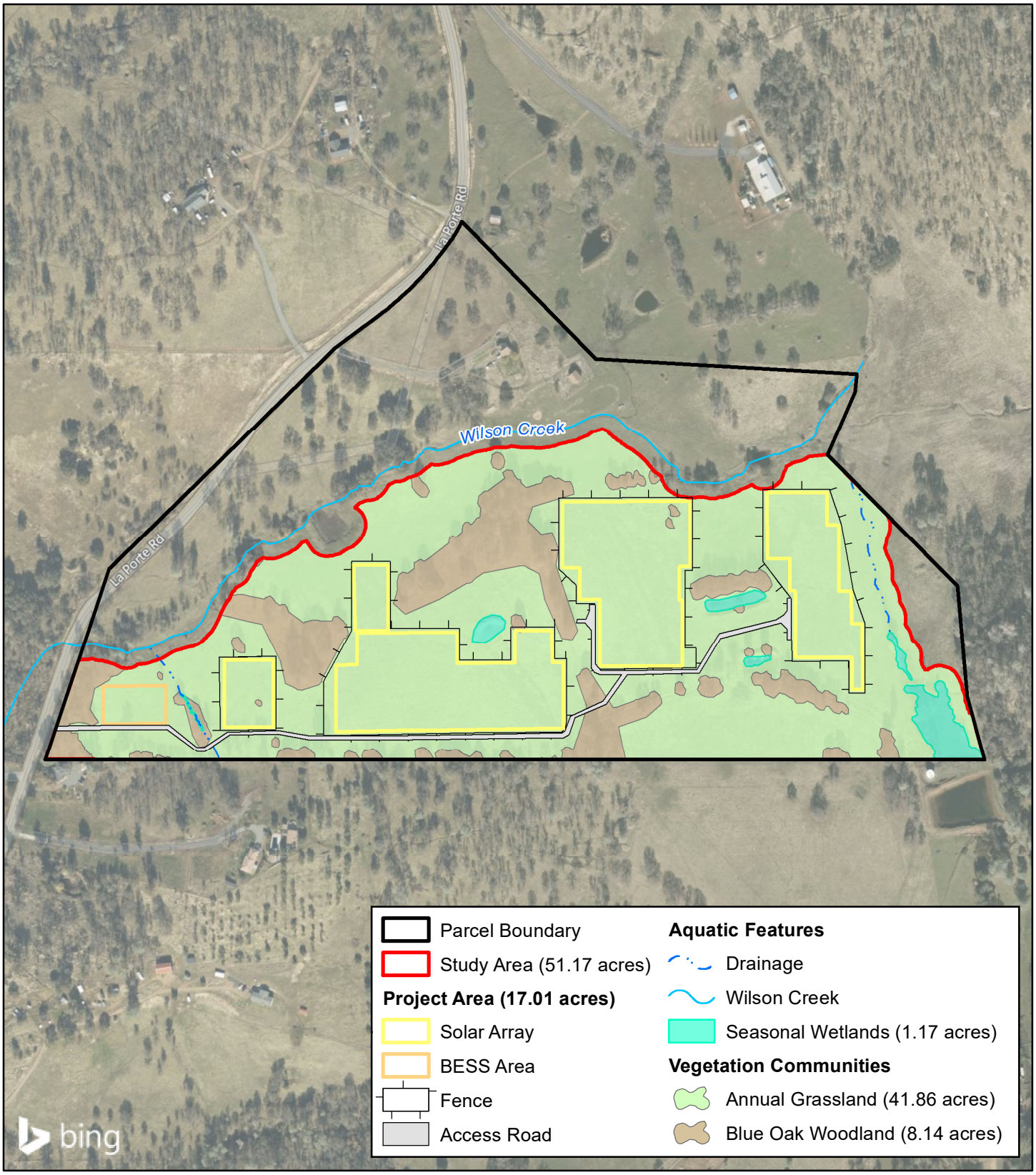
Created By: C BARKERSWITZER Document Path: \\azrgisstorp03\GIS_Projects\Client\GANDA\Renewable_Properties\20232542_RPCA_LaPorte_Solar\BOT_Figure2_LaPorte_Solar_ProjectArea.mxd



Source: Bing Maps

0 225 450 Feet

0 75 150 Meters

N

Scale 1:5,400
1 Inch = 450 Feet

Figure 3. Vegetation Communities and Aquatic Features
RPCA La Porte Road Solar Project
Butte County, California

KLEINFELDER
Bright People. Right Solutions.

Photo 1. Looking north along Wilson Creek that runs parallel to the western boundary of the Project Area

Photo 2. Looking east through the center of the Project Area

Photo 3. Looking south at a portion of the blue oak woodland in the Project Area

Photo 4. Looking northwest at the berm and potentially jurisdictional depression in the center of the Project Area

Figure 4a. Photos
Page 1 of 2
La Porte Road Solar Project
Butte County, California
September 9, 2022

Created By: C.BARKER/RWITZER Document Path: \\sacgis1\corp03\GIS_Projects\Client\GANDA\Renewable_Properties\20222540_RPCA_LaPorte_Solar\Figure4a_LaPorte_Solar_Photos_01.mxd

Photo 5. Looking north across the
Project Area from the southern boundary

Photo 6. Looking west along the
southern boundary of the Project Area
from the southeast corner

Photo 7. Looking south at the drainage
that runs through the Project Area

Created By: C BARKERSWITZER Document Path: \\azrgisstorp03\GIS_Projects\Client\GANDA\Renewable_Properties\20232542_RPCA_LaPorte_Solar\Figure4a_LaPorte_Solar_Photos_02.mxd

Figure 4a. Photos
Page 2 of 2
La Porte Road Solar Project
Butte County, California
September 9, 2022

Photo 1. Wetland outside of southeastern corner of study area

Photo 2. Looking south at the eastern section of the study area

Photo 3. Looking west across center of study area

Photo 4. Looking west at a pond in the eastern portion of the study area

Figure 4b. Photos
La Porte Road Solar Project
Butte County, California
May 23, 2023

Created By: C.BARKER/RWITZER Document Path: \\sacgis1\corp03\GIS_Projects\Client\GANDA\Renewable_Properties\20223540_BPCA_LaPorte_Solar\Figure4b_LaPorte_Solar_Photos_01.mxd

APPENDIX A
Special-Status Wildlife Species with Known or Potential Occurrence in the Vicinity of the La Porte Road Solar Project in Butte County, California

Common Name	Scientific Name	Federal/State Status[1]	Habitat Associations	Potential to Occur in the Project Area[2]
Invertebrates				
monarch – California overwintering population	*Danaus plexippus* (pop. 1)	Candidate Threatened/None	Monarch adults make massive, multi-generation migrations from August-October, flying south thousands of miles to hibernate along the California coast and in central Mexico. Monarchs stop to feed on flower nectar and to roost together at night. During warm winter days, the butterflies may take moisture and flower nectar. Most mating happens before they journey north in the spring, when females lay single eggs along the way under host plant leaves (*Asclepias* sp.); caterpillars eat flowers and leaves. Overwintering sites along the California coast are important for conservation of this species.	**Not expected to occur.** Suitable host plants (*Asclepias* sp.) for this species were not observed within the project area during any field surveys.
valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	Threatened/None	Valley elderberry longhorn beetle is completely dependent on its host plant, elderberry (*Sambucus* ssp.), which occurs in riparian and other woodland communities in California's Central Valley and the associated foothills. Female beetles lay their eggs in crevices on the stems or on the leaves of living elderberry plants. When the eggs hatch, larvae bore into the stems and the larval stages last for one to two years. The fifth instar larvae create emergence holes in the stems and then plug the holes and remain in the stems through pupation. Adults emerge through the emergence holes from late March through June. The short-lived adult beetles forage on leaves and flowers of elderberry shrubs.	**Not expected to occur.** Suitable habitat for this species in the form of elderberry shrubs were not observed within the project area.
vernal pool fairy shrimp	*Branchinecta lynchi*	Threatened/None	Vernal pool fairy shrimp is adapted to seasonally inundated aquatic features and occur primarily in vernal pools and seasonal wetlands that fill with water during fall and winter rains, then dry up in spring and summer. Typically, the majority of pools in any vernal pool complex are not inhabited by the species at any one time. Different pools within or between complexes may provide habitat for the fairy shrimp in alternative years, as climatic conditions vary.	**Not expected to occur.** Suitable aquatic habitat for this species is not present within the project area.

Common Name	Scientific Name	Federal/State Status[1]	Habitat Associations	Potential to Occur in the Project Area[2]
vernal pool tadpole shrimp	*Lepidurus packardi*	Endangered/None	Vernal pool tadpole shrimp is associated with low-alkalinity, ephemeral freshwater habitats in grasslands, including alkaline pools, clay flats, vernal lakes, vernal pools, vernal swales, and other seasonal wetlands in California. Suitable vernal pools and seasonal swales are generally underlain by hardpan or sandstone.	**Not expected to occur.** Suitable aquatic habitat for this species is not present within or adjacent to the project area.
Fish				
chinook salmon – (Central Valley spring-run ESU)	*Oncorhynchus tshawytscha*	Threatened/Threatened	Adult Central Valley spring-run Chinook salmon leave the ocean to begin their upstream migration in late January and early February, and enter the Sacramento River between March and September, primarily in May and June. Spring-run Chinook salmon generally enter rivers as sexually immature fish and must hold in freshwater for up to several months before spawning. While maturing, adults hold in deep, cold pools. Spawning normally occurs between mid-August and early October, peaking in September.	**Not expected to occur.** Suitable aquatic habitat for this species is not present within or adjacent to the project area.
green sturgeon – southern DPS	*Acipenser medirostris*	Threatened/SSC	Green sturgeon primarily spawn in the upper mainstem of the Sacramento River, although some spawning activity has recently been documented in the Feather and Yuba rivers. The extent to which the species uses the San Joaquin River is unclear, although an adult fish was recently found in a major tributary, the Stanislaus River, indicating at least some use of that system. Green Sturgeon are one of the most marine-oriented sturgeon species, spending much of their life in coastal Pacific Ocean waters from Ensenada, Mexico, to the Bering Sea. The species frequently enters large coastal bays and estuaries, including the San Francisco Bay estuary, Columbia River estuary (WA), and Willapa Bay (WA) during the summer to feed, with fish from both DPS's mingling freely in those habitats.	**Not expected to occur.** Suitable aquatic habitat for this species is not present within or adjacent to the project area.

Common Name	Scientific Name	Federal/State Status[1]	Habitat Associations	Potential to Occur in the Project Area[2]
steelhead – (Central Valley DPS)	*Oncorhynchus mykiss irideus*	Threatened/None	Central Valley steelhead spawn downstream of dams on every major tributary within the Sacramento and San Joaquin River systems. Regardless of life history strategy, for the first year or two of life, rainbow trout and steelhead are found in cool, clear, fast-flowing permanent streams and rivers where riffles predominate over pools, there is ample cover from riparian vegetation or undercut banks, and invertebrate life is diverse and abundant.	**Not expected to occur.** Suitable aquatic habitat for this species is not present within or adjacent to the project area.
Amphibians and Reptiles				
California red-legged frog	*Rana draytonii*	Threatened/None, SSC	California red-legged frogs occur in different habitats depending on their life stage, the season, and weather conditions. Breeding habitat includes coastal lagoons, marshes, springs, permanent and semi-permanent natural ponds, and ponded backwater portions of streams. These frogs also breed in artificial impoundments including stock ponds, irrigation ponds, and siltation ponds. Creeks and ponds with dense growths of woody riparian vegetation, especially willows (*Salix* spp.) are preferred, although the absence of vegetation at an aquatic site does not rule out the possibility of occupancy. Adult frogs prefer dense, shrubby or emergent riparian vegetation near deep (≥2 to 3 feet), still or slow-moving water, especially where dense stands of overhanging willow and an intermixed fringe of cattail occur adjacent to open water.	**Not expected to occur.** Suitable aquatic habitat for this species is not present within or adjacent to the project area and the nearest documented occurrence is approximately 18 miles north of the project area near Berry Creek.
coast horned lizard	*Phrynosoma blainvillii*	None/SSC	Coast horned lizard prefers open areas of sandy soil and low vegetation in valleys, foothills and semiarid mountains. Found in grasslands, coniferous forests, woodlands, and chaparral, with open areas and patches of loose soil. Often found in lowlands along sandy washes with scattered shrubs and along dirt roads.	**Not expected to occur.** Suitable habitat for this species is not present within or adjacent to the project area.
foothill yellow-legged frog (Feather River and north Sierra DPS)	*Rana boylii*	None/Threatened, SSC	Foothill yellow-legged frog inhabits perennial streams and rivers with rocky substrate and open, sunny banks, in forest, chaparral, and woodland habitat. Sometimes found in isolated pools associated with these features, including vegetated backwaters, and deep, shaded, spring-fed pools. Always found within a few feet of water.	**Not expected to occur.** Suitable habitat for this species is not present within or adjacent to the project area.

Common Name	Scientific Name	Federal/State Status[1]	Habitat Associations	Potential to Occur in the Project Area[2]
giant gartersnake	*Thamnophis gigas*	Threatened/Threatened	Giant gartersnake is found in isolated populations restricted to the Central Valley of California. It is found in freshwater marshes, wetlands, irrigation ditches, low gradient streams (absent of predatory fish), and rice fields containing emergent vegetation. Adjacent upland grassland habitat is necessary for cover and aestivation.	**Not expected to occur.** Suitable habitat for this species is not present within the project area.
western pond turtle	*Emys marmorata*	None/SSC	Western pond turtles use both aquatic and terrestrial habitats. They are found in permanent or nearly permanent rivers, lakes, streams, ponds, wetlands, creeks, reservoirs, agricultural ditches, estuaries, and brackish waters. Western pond turtles prefer areas that provide cover from predators, such as vegetation and algae, as well as basking sites for thermoregulation. Adults tend to favor deeper, slow-moving water, whereas hatchlings search for slow and shallow water that is slightly warmer. Terrestrial habitats are used for wintering and egg-laying and usually consist of burrows in leaves and soil. They are rarely found at elevations above 4,900 feet.	**Not expected to occur.** Suitable aquatic habitat for this species is not present within or adjacent to the project area.
western spadefoot	*Spea hammondii*	None/SSC	Western spadefoot inhabits areas with slightly moist, friable soils in mostly treeless habitats. They are usually absent from narrow canyons and highly mesic habitats and require rain pools with little to no vegetation for spawning.	**Not expected to occur.** Suitable habitat for this species is not present within the project area.
Birds				
bald eagle	*Haliaeetus leucocephalus*	Delisted, BGEPA/ Endangered, FP	Bald eagle lives near large bodies of open water such as lakes, marshes, estuaries, seacoasts and rivers where fish are abundant. It usually nests within one mile of water in tall trees with open branchwork bordering lakes or large rivers. In Central California, bald eagles prefer foothill pines for nesting.	**Low potential to occur.** Although there are a few suitable nest trees for this species on the site, there is not suitable foraging habitat within one mile of the site, and the nearest documented occurrence is over ten miles north of the site near Lake Oroville.
bank swallow	*Riparia riparia*	None/Threatened	Bank swallow is restricted to riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with fine-textured or sandy soils, into which it digs nesting holes. It feeds predominantly over open riparian areas, but also over brushland, grassland, wetlands, water, and cropland.	**Not expected to occur.** Suitable habitat for this species is not present within the project area.
California black rail	*Laterallus jamaicensis coturniculus*	None/Threatened, FP	California black rail occurs near freshwater marshes along the margins of ponds, lakes, and water impoundments; also herb dominated wetlands on sloped ground associated with springs,	**Not expected to occur.** Suitable habitat for this species is not present within or adjacent to the project area.

Common Name	Scientific Name	Federal/State Status[1]	Habitat Associations	Potential to Occur in the Project Area[2]
			canal leaks, seepage from impoundments and agricultural irrigation. Needs water depths of about one inch that do not fluctuate during the year and dense vegetation for nesting habitat.	
northern goshawk	*Accipiter gentilis*	None/SSC	Northern goshawk prefers dense coniferous and deciduous forests. Nest sites are often in a deciduous tree in mixed forest, at a major crotch in the trunk. Forages on small mammals and birds.	**Not expected to occur.** Suitable habitat for this species is not present within the project area.
Swainson's hawk	*Buteo swainsoni*	None/Threatened	Swainson's hawk spends the breeding season in the Central Valley of California and is commonly found in agricultural areas or open grasslands containing solitary trees for nesting. Its diet consists of insects, small mammals and reptiles.	**Low potential to occur.** This species prefers habitat within or near agricultural areas within the Central Valley in California and the nearest documented occurrence is over 8 miles west of the site near Honcut.
tricolored blackbird	*Agelaius tricolor*	None/Threatened, SSC	Tricolored blackbird is a colonial species found almost exclusively in California. It utilizes wetlands, marshes and agricultural grain fields for foraging and nesting. The tricolored blackbird population has declined significantly in recent years due to habitat loss and harvest of grain fields before young have fledged.	**Not expected to occur.** Suitable habitat for this species is not present within or adjacent to the project area.
Mammals				
pallid bat	*Antrozous pallidus*	None/SSC	Pallid bat occupies a variety of habitats including grassland, shrubland, woodland and forests from sea level up through mixed conifer forest. It roosts in caves, mines, crevices and occasionally hollow trees or buildings, and prefers open habitats for foraging.	**Low potential to occur.** Although this species could potentially roost in the trees on the site and forage throughout the site, there are no documented occurrences of this species within 10 miles of the site.
Townsend's big-eared bat	*Corynorhinus townsendii*	None/SSC	Townsend's big-eared bat is found throughout most of western North America. Hibernates and roosts in caves and mines near entrances, or cave like structures such as buildings or under decks. Forages in forested habitats, along open edges.	**Not expected to occur.** Suitable roosting habitat for this species is not present within the project area.
western mastiff bat	*Eumops perotis californicus*	None/SSC	Western mastiff bat occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban areas. Suitable habitat consists of extensive open areas with abundant roost locations provided by crevices in rock outcrops and buildings. When roosting in rock crevices, this species needs vertical faces to drop off to take flight. Catches and feeds on insects in flight.	**Not expected to occur.** Suitable roosting habitat for this species is not present within the project area.

Common Name	Scientific Name	Federal/State Status[1]	Habitat Associations	Potential to Occur in the Project Area[2]
western red bat	*Lasiurus blossevillii*	None/SSC	Western red bat is locally common in some areas of California, occurring from Shasta County to the Mexican border, west of the Sierra Nevada/Cascade crest and deserts. Roosting habitat includes forests and woodlands from sea level up through mixed conifer forests. This species feeds over a wide variety of habitats including grasslands, shrublands, open woodlands and forests, and croplands.	**Not expected to occur.** Although suitable roosting habitat for this species may be present in the oak trees on the site, there are no documented occurrences within 20 miles of the project area.

[1]**Status Legend:**

SSC: Species of Special Concern (CDFW)
FP: Fully Protected (CDFW)
BGEPA: Bald and Golden Eagle Protection Act (USFWS)

[2] **Definitions Regarding Potential for Occurrence**

- Not expected to occur – Habitat within and adjacent to the Project Area is lacking for the species life history requirements (foraging, breeding, cover, range, elevation, hydrology, vegetation community, site history, and/or disturbance regime). There are no documented occurrences of the species in the larger vicinity of the Project Area.
- Low – Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the Project Area is unsuitable or of poor quality. Because of this, the species is highly unlikely to found within the Project Area. Any documented occurrences of the species are likely further than possible for the species to occur on the site, the date of the occurrence is several decades old, or the vicinity of the Project Area has been developed in a manner that likely precludes the species from presently occurring.
- Moderate – Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the Project Area is unsuitable. There are recently documented occurrences in the near vicinity of the Project Area; therefore, the species has a moderate probability of utilizing the site.
- High – All of the habitat components meeting the species requirements are present, and/or most of the habitat on or adjacent to the Project Area is highly suitable. There are documented occurrences of the species on or immediately adjacent to the Project Area; therefore, the species has a high probability of utilizing the Project Area.
- Present – Species was observed within the Project Area during field surveys or has been recorded (i.e., CNDDB, or other reports) within the Project Area recently.

Sources:

California Department of Fish and Wildlife (CDFW). 2023. California Natural Diversity Database (CNDDB). Rarefind, Version 5 (Commercial Subscription). Accessed December 2023. https://apps.wildlife.ca.gov/rarefind/view/RareFind.aspx

United States Fish and Wildlife Service (USFWS). 2023. Information for Planning and Consultation (IPaC). The Environmental Conservation Online System. Accessed December 2023. Sacramento, California. Website https://ecos.fws.gov/ipac/.

APPENDIX B
Special-Status Plant Species with Known or Potential Occurrence in the Vicinity of the La Porte Road Solar Project in Butte County, California

Scientific Name	Common Name	Status (Federal/State, CRPR)[1]	Life Form/Primary Habitat Associations/ Elevation Range (feet)/Blooming Period	Potential to Occur[2]
Carex xerophila	chaparral sedge	None/None, CRPR 1B.2	Perennial herb found in chaparral, cismontane woodland, lower montane coniferous forest (serpentine, gabbroic soils). Elevation 1,320-2,310 feet. Blooms Mar-Jun.	**Not expected to occur.** Suitable habitat for this species is not present within the project area.
Castilleja rubicundula var. *rubicundula*	pink creamsacs	None/None, CRPR 1B.2	Annual herb found in meadows and seeps, valley and foothill grasslands. Elevation 65-2,985 feet. Blooms Apr – Jun.	**Not expected to occur.** Suitable habitat for this species is not present within the project area.
Clarkia biloba ssp. *brandegeeae*	Brandegee's clarkia	None/None, CRPR 4.2 *included by request of County	Annual herb found in chaparral, cismontane woodland, and lower montane coniferous forest. Elevation 245 – 3,000 feet. Blooms (Mar)May-Jul.	**Low potential to occur.** Although potentially suitable habitat for this species may be present within the woodland patches in the Project area, focused surveys for this species were negative.
Clarkia gracilis ssp. *albicaulis*	white-stemmed clarkia	None/None, CRPR 1B.2	Annual herb found in chaparral and cismontane woodland. Elevation 805-3,560 feet. Blooms May-Jul.	**Low potential to occur.** Although potentially suitable habitat for this species may be present within the woodland patches in the Project area, the Project area is on the edge of the species range.
Clarkia mosquinii	Mosquin's clarkia	None/None, CRPR 1B.1	Annual herb with a preference for cismontane woodland and lower montane coniferous forest. Elevation 605-4,890 feet. Blooms May-Jul (Sep).	**Low potential to occur.** Suitable habitat for this species is patchy and scarce within the project area.
Erythranthe filicifolia	fern-leaved monkeyflower	None/None, CRPR 1B.2	Annual herb found in chaparral, lower montane coniferous forest, meadows and seeps (ephemeral). Usually found in slow-draining, ephemeral seeps among exfoliating granitic slabs Elevation 1,360-5,610 feet. Blooms Apr-Jun.	**Not expected to occur.** Suitable habitat for this species is not present within the project area.
Fissidens pauperculus	minute pocket moss	Endangered/Rare, CRPR 1B.2	Moss found in north coast coniferous forest (damp coastal soil). Elevation 30-3,360 feet.	**Not expected to occur.** Suitable habitat for this species is not present within the project area.

Scientific Name	Common Name	Status (Federal/State, CRPR)[1]	Life Form/Primary Habitat Associations/ Elevation Range (feet)/Blooming Period	Potential to Occur[2]
Fremontodendron decumbens	Pine Hill flannelbush	Endangered/Rare, CRPR 1B.2	Perennial evergreen shrub found in chaparral, cismontane woodland (serpentine or gabbroic soils). Elevation 2,260-2,520 feet. Blooms Apr-Jun.	**Not expected to occur.** Suitable habitat and soils for this species are not present within the project area. Not observed during field survey.
Hibiscus lasiocarpos var. *occidentalis*	woolly rose-mallow	None/None, CRPR 1B.2	Perennial rhizomatous herb (emergent) found in marshes and swamps (freshwater); often in rip rap on sides of levees. Elevation 0-375 feet. Blooms Jun-Sep.	**Not expected to occur.** Suitable habitat for this species is not present within the project area.
Juncus leiospermus var. *ahartii*	Ahart's dwarf rush	None/None, CRPR 1B.2	Annual herb found in valley and foothill grasslands. Elevation 100-750 feet. Blooms Mar-May.	**Low potential to occur.** Although there is potentially suitable habitat in the wetlands within and adjacent to the site, there are no documented occurrences of this species within seven miles of the site, and this species was not observed during rare plant surveys.
Juncus leoispermus var. *leoispermus*	Red Bluff dwarf rush	None/None CRPR 1B.1	Annual herb with a preference for meadows and seeps, valley and foothill grasslands and vernal pools. Elevation 115-4,100 feet. Blooms Mar-Jun.	**Low potential to occur.** Although there is potentially suitable habitat in the wetlands within and adjacent to the site, there are no documented occurrences of this species within 14 miles of the site, and this species was not observed during rare plant surveys..
Limnanthes floccosa ssp. *californica*	Butte County meadowfoam	Endangered/ Endangered, CRPR 1B.1	Annual herb found in valley and foothill grassland (mesic), vernal pools. Elevation 160-3,050 feet. Blooms Mar-May.	**Not expected to occur.** Suitable habitat for this species is not present within the project area.
Orcuttia tenuis	slender Orcutt grass	Threatened/Endangered, CRPR 1B.1	Annual herb. Vernal pools (often gravelly). Elevation 100-5,280 feet. Blooms May-Sep.	**Not expected to occur.** Suitable habitat for this species is not present within the project area.
Packera layneae	Layne's ragwort	Threatened/Rare, CRPR 1B.2	Perennial herb found in chaparral, cismontane woodland. Elevation 65-3,560 feet. Blooms Apr-Aug.	**Not expected to occur.** Suitable habitat for this species is not present within the project area.
Paronychia ahartii	Ahart's paronychia	None/None, CRPR 1B.1	Annual herb found in cismontane woodland, valley and foothill grasses, vernal pools. Elevation 100-1,675 feet. Blooms Feb-Jun.	**Not expected to occur.** Suitable habitat for this species is not present within the project area.

Scientific Name	Common Name	Status (Federal/State, CRPR)[1]	Life Form/Primary Habitat Associations/ Elevation Range (feet)/Blooming Period	Potential to Occur[2]
Poa sierrae	Sierra blue grass	None/None, CRPR 1B.3	Perennial rhizomatous herb found in lower montane coniferous forest openings. Elevation 1,095-4,500 feet. Blooms Apr-Jul.	**Not expected to occur.** Suitable habitat for this species is not present within the project area and the site is outside of the known elevation range.
Trifolium jokerstii	Butte County golden clover	None/None, CRPR 1B.2	Annual herb found in valley and foothill grasslands and vernal pools around Lake Oroville. Elevation 165-1,575 feet. Blooms Mar-May.	**Not expected to occur.** Suitable habitat for this species is not present within the project area.
Wolffia brasiliensis	Brazilian watermeal	None/None, CRPR 2B.3	Perennial herb (aquatic) found in marshes and swamps. Elevation 65-330 feet. Blooms Apr-Dec.	**Not expected to occur.** Suitable habitat for this species is not present within the project area.

[1] Status Legend:
CRPR 1A: Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere
CRPR 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere
CRPR 2A: Plants Presumed Extirpated in California, But More Common Elsewhere
CRPR 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

[2] Definitions Regarding Potential for Occurrence

- Not expected to occur – Habitat within and adjacent to the Project Area is lacking for the species life history requirements (foraging, breeding, cover, range, elevation, hydrology, vegetation community, site history, and/or disturbance regime). There are no documented occurrences of the species in the larger vicinity of the Project Area.
- Low – Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the Project Area is unsuitable or of poor quality. Because of this, the species is highly unlikely to found within the Project Area. Any documented occurrences of the species are likely further than possible for the species to occur on the site, the date of the occurrence is several decades old, or the vicinity of the Project Area has been developed in a manner that likely precludes the species from presently occurring.
- Moderate – Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the Project Area is unsuitable. There are recently documented occurrences in the near vicinity of the Project Area; therefore, the species has a moderate probability of utilizing the site.
- High – All of the habitat components meeting the species requirements are present, and/or most of the habitat on or adjacent to the Project Area is highly suitable. There are documented occurrences of the species on or immediately adjacent to the Project Area; therefore, the species has a high probability of utilizing the Project Area.
- Present – Species was observed within the Project Area during field surveys or has been recorded (i.e., CNDDB, or other reports) within the Project Area recently.

Sources:

California Native Plant Society (CNPS). 2023. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society. Sacramento, CA. Accessed December 2023.

MEMORANDUM

TO:	Brian Madigan, Senior Permitting Manager, Renewable Properties, LLC
FROM:	Susan Dewar, Project Manager
DATE:	June 1, 2023
SUBJECT:	La Porte Road Solar Project Botanical Survey

Kleinfelder is pleased to provide the following results of a special-status plant survey completed in support of the La Porte Road Solar Project, located in Butte County, California (Figure 1).

The proposed La Porte Road Solar Project (Project) is a small-scale utility solar generating and energy storage project located on approximately 23 acres of an 82-acre parcel just northeast of the community of Bangor in unincorporated Butte County (Project Area). The Project is located at 5864 La Porte Road (APN # 028-240-061) (Figure 2). Wildcat Renewables, LLC has entered into a long-term lease agreement with the property owner (Ross W. McGowan Trust) to facilitate the development of a small-scale, solar energy generating facility.

The Project will generate a total of 3.0 megawatts (MW) alternating current (AC) (4.2 MW direct current (DC)) of clean, reliable solar energy when complete. The Project will interconnect to Pacific Gas and Electric's (PG&E's) pre-existing electrical distribution system located on site. The power generated from this facility will be sold to PG&E through a long-term Power Purchase Agreement (PPA). Additionally, the Project will be equipped with energy storage technology that will allow on-site renewable energy generation to be stored and dispatched onto the grid when needed.

The Project will utilize approximately 7,776 solar modules and 24 string inverters to convert the sun's energy into usable, AC power. Single-axis tracking technology will be utilized to allow the modules to efficiently track the sun throughout the day and maximize the efficiency of solar collection. The modules will be mounted on a steel racking system, which will be anchored into the ground using driven steel piers. The overall height of the array will be no more than 15-feet tall.

Project Location

The approximate 82-acre parcel is located on the east side of La Porte Road, approximately 0.35-mile northeast of the intersection of Los Verjeles Road and La Porte Road (Figure 2). The parcel is surrounded primarily by rural residential properties where grazing and small-scale agricultural land uses are common.

The Project Area is situated at an elevation of approximately 800-900 feet above mean sea level in the foothills of the Sierra Nevada. The Project Area is situated within Township 18 North, Range 5 East, and Section 27 of the Bangor 7.5-minute U.S. Geological Survey (USGS) quadrangle. The corresponding latitude and longitude at the approximate center of the Project Area is 39°23'36.33" north latitude and 121°23'57.49" west longitude.

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Methods

Special-status plant species present or potentially present within or adjacent to the Project Area were identified through a desktop literature review using the following sources: United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) Trust Resource Report (USFWS 2022a); California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) (CDFW 2022); and the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Vascular Plants (2022). Additionally, the Natural Resources Conservation Service (NRCS), Web Soil Survey (WSS) was queried to determine soil types that exist within the boundary of the Project Area (USDA 2022) and the National Wetlands Inventory (NWI) was reviewed to assess potential wetland habitats in the study area (USFWS 2022b). The CNDDB and CNPS database searches included the 7.5-minute USGS Bangor quadrangle and the eight surrounding quadrangles (9-quad search). The IPaC search included the Project Area and a two-mile buffer. Following a review of these resources, Kleinfelder also reviewed relevant life history information on those species documented as occurring in the region, including habitat type, soils, and elevation preferences.

Special-status species included in this analysis are those that are considered threatened, endangered, candidate for listing, species of special concern or fully protected by CDFW, or USFWS, or ranked by CNPS. California Rare Plant Rank (CRPR) 1 and 2 plant species were included in the CNPS search. One CRPR list 4 species (Brandagee's clarkia [*Clarkia biloba* ssp. *brandegeeae*]) was assessed and targeted in the pedestrian survey based on County comments from the Project's pre-development meeting August 17, 2022. Attachment B documents all plant species assessed in the desktop analysis.

On May 23, 2023, Kleinfelder botanist Shane Hanofee conducted a pedestrian and visual botanical survey of the "study area" that includes the Project Area and all other areas within the subject parcel south of Wilson Creek and west of a wetland seep on the east side of the parcel (Figure 2). The survey followed procedural requirements for protocol rare plant surveys, with all vascular plants identified to a taxonomic rank sufficient for determining status (CDFW 2018, CNPS 2001).

The study area was traversed on foot via meandering transects. All vascular plant species encountered were identified to the level necessary to determine status (Appendix A). Keys used for identification include those found in *The Jepson Manual Second Edition* (Baldwin et al. 2012). The timing of the survey was within the typical bloom period for targeted special-status species.

Several constructed ponds located within the Project Area are not proposed for disturbance by the Project and were excluded from the botanical survey study area.

Results and Discussion

The Project Area consists of open grasslands gently sloping to the north. Small stands of blue oak (*Quercus douglasii*) and interior live oak (*Quercus wizlisenii*) are present where soil moisture is greater (Figure 3). The grasslands are dominated by non-native grass species including greater rattlesnake grass (*Briza maxima*), Italian wild rye (*Festuca perennis*), and medusahead grass (*Elymus caput-medusae*). A list of all plant species observed in the survey area is presented in Appendix A.

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Seventeen special-status species were identified from background research and evaluated for potential to occur within the Project Area (Appendix C). None of the species assessed were found to have a moderate or greater potential to occur. No special status plants were located within the Project Area during the floristic survey.

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Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilkin, editors. 2012. *The Jepson Manual: Vascular Plants of California*, second edition. University of California Press, Berkeley, CA.

California Department of Fish and Wildlife (CDFW). 2018. *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities.* March 20, 2018.

CDFW (California Department of Fish and Wildlife). 2022. California Natural Diversity Database (CNDDB). Rarefind, Version 5 (Commercial Subscription). 2022. Accessed June 2022. Sacramento, California. https://map.dfg.ca.gov/rarefind/Login.aspx?ReturnUrl=%2frarefind%2fview%2fRareFind.aspx.

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USDA (United States Department of Agriculture). 2022. Natural Resources Conservation Service (NRCS). Web Soil Survey. Accessed June 2022. http://websoilsurvey.sc.egov.usda.gov/ App/HomePage.htm.

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USFWS. 2022a. Information for Planning and Consultation (IPaC). Accessed June 2022. https://ecos.fws.gov/ipac/.

USFWS. 2022b. May 2022. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C.

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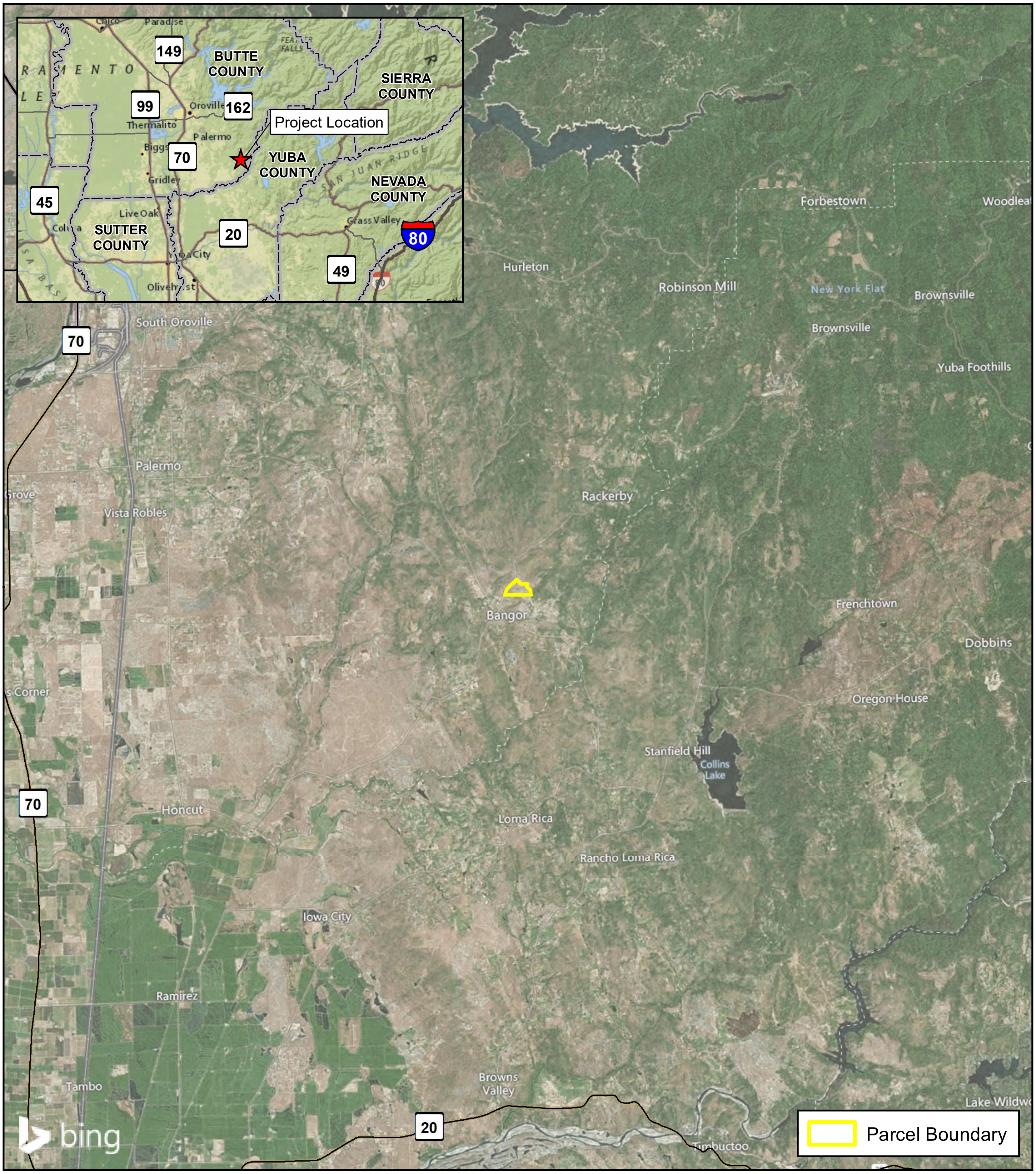

Created By: CBarkerSwitzer Document Path: \\azrgisstorp03\GIS_Projects\Client\GANDA\Renewable_Properties\20232542_RPCA_LaPorte_Solar\Figure1_LaPorte_Solar_RegionalVicinity.mxd

Source: Bing Maps

0 1.5 3 Miles

0 2.5 5 Kilometers

N

Scale 1:190,080
1 in = 3 miles

Figure 1. Regional Vicinity
La Porte Road Solar Project
Butte County, California

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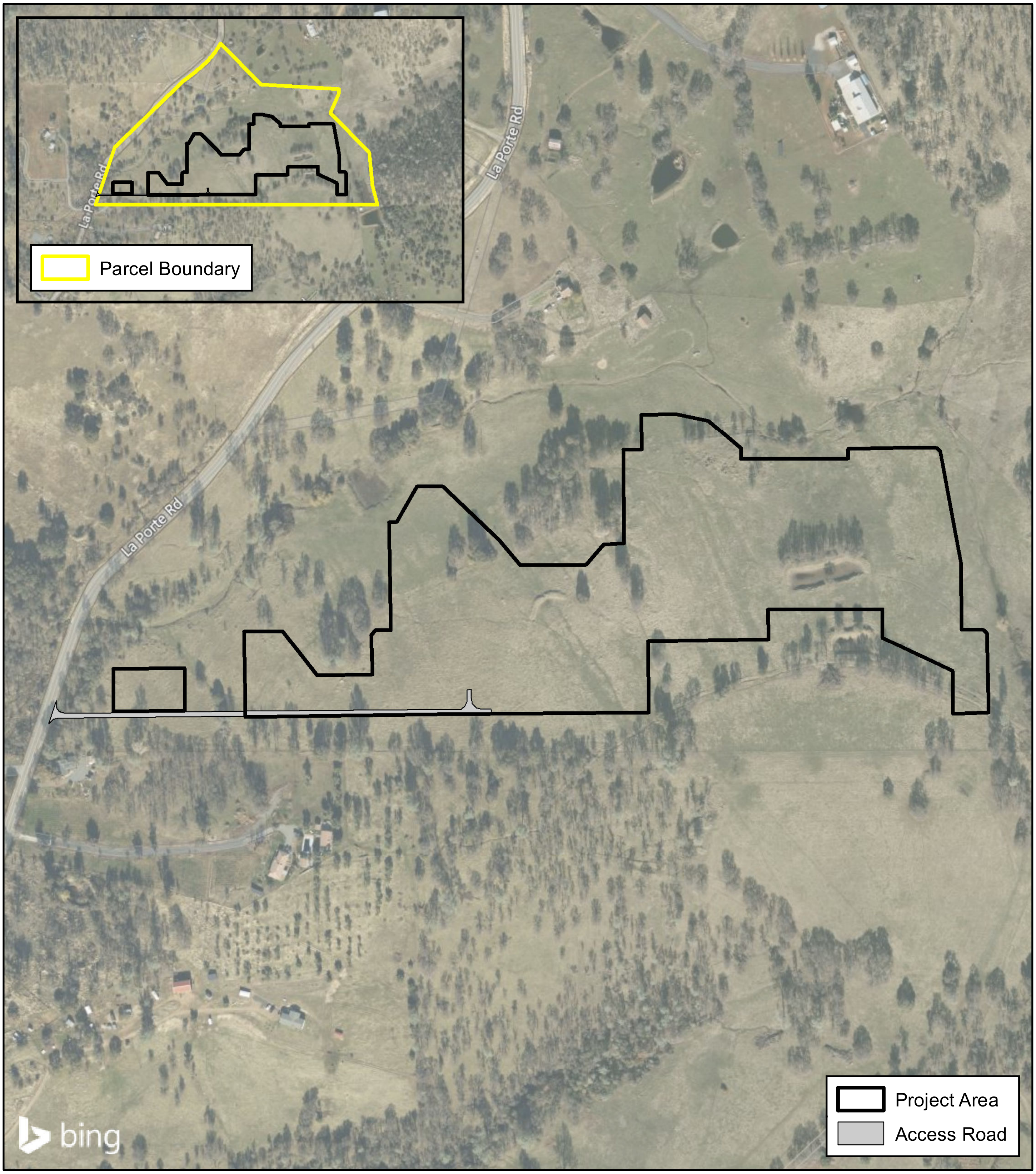

USGS 7.5' Quad: BANGOR (1994)
Legal Description: T18N, R05E, SEC 27

0 200 400 Feet

0 50 100 Meters

N

Scale 1:4,800
1 Inch = 400 Feet

Figure 2. Project Area
La Porte Road Solar Project
Butte County, California

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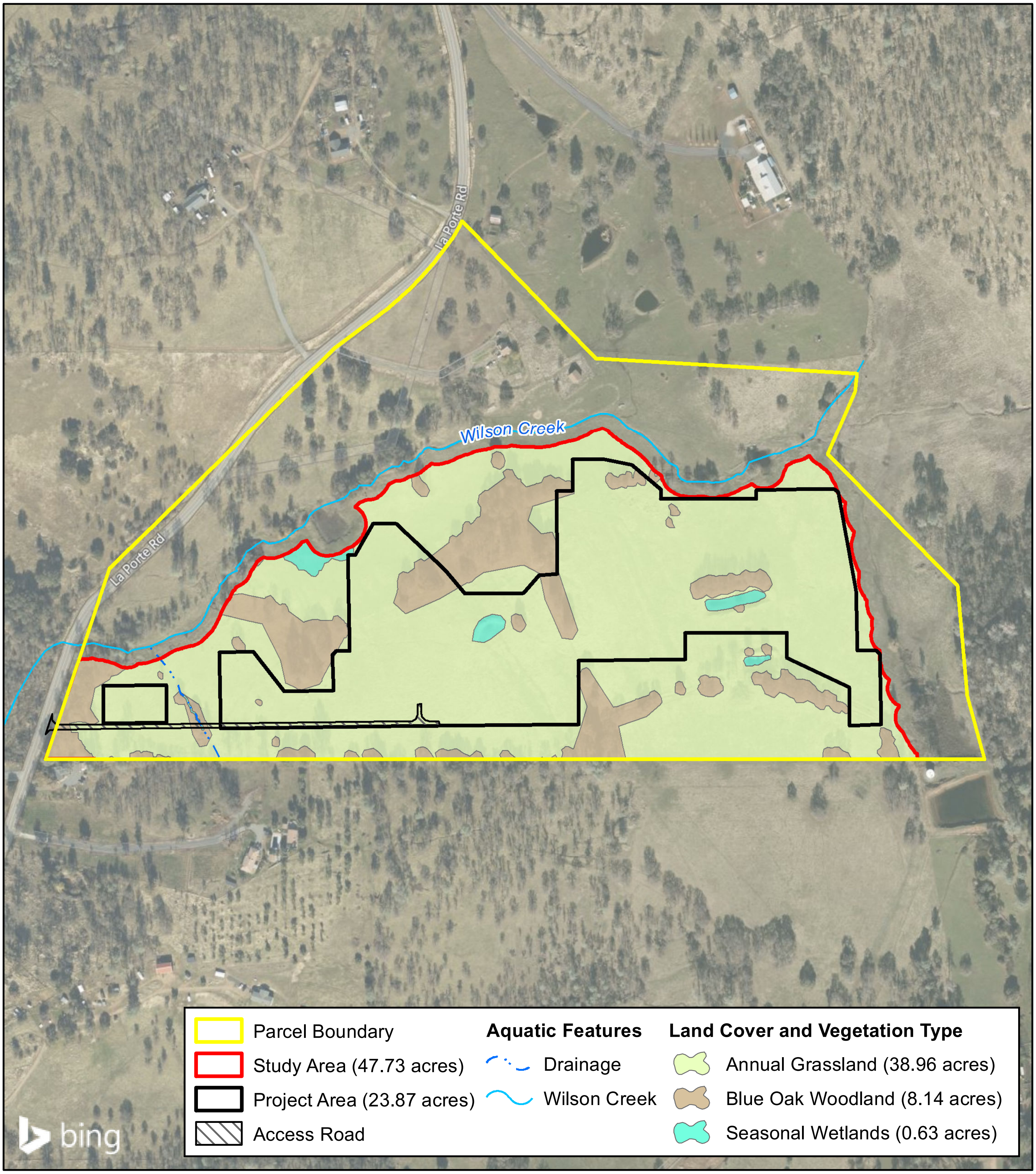

Source: Bing Maps

0 225 450 Feet

0 75 150 Meters

N

Scale 1:5,400
1 Inch = 450 Feet

Figure 3. Vegetation Communities and Aquatic Features

RPCA La Porte Road Solar Project
Butte County, California

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Appendix A

Comprehensive Plant List

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Scientific Name	Common Name
*Aegilops triuncialis**	Barbed goatgrass
*Aira caryophyllea**	Silver hairgrass
Amsinckia sp.	Fiddleneck
*Avena barbata**	Wild oat
*Briza maxima**	Greater rattlesnakegrass
*Briza minor**	Lesser rattlesnakegrass
Brodiaea coronaria	Crown brodiaea
Brodiaea elegans	Harvest brodiaea
*Bromus diandrus**	Bromegrass
*Bromus hordeaceus**	Soft brome
*Bromus rubens**	Red brome
Carduus pycnocephalus ssp. *pycnocephalus**	Italian thistle
Castilleja attenuata	Valley tassels
Ceanothus cuneatus	Buckbrush
*Centaurea solstitialis**	Yellow star thistle
Chlorogalum pomeridianum	Wavy-leaved soaproot
Clarkia purpurea ssp. *quadrivulnera*	Purple clarkia
*Convolvulus arvensis**	Bindweed
*Cynodon dactylon**	Bermuda grass
*Cynosurus echinatus**	Annual dogtail
Dichelostemma multiflorum	Round-tooth ookow
Eleocharis sp.	Spikerush
*Elymus caput-medusae**	Medusahead grass
*Erodium botrys**	Filaree
*Festuca myuros**	Rat tail fescue
*Festuca perennis**	Italian ryegrass
Frangula californica	Coffeeberry
*Galium parisiense**	Bedstraw
*Gastridium phleoides**	Nit grass
*Geranium dissectum**	Cut-leaf geranium
*Hordeum murinum**	Foxtail barley
*Hypericum perforatum**	Klamathweed
*Hypochaeris radicata**	Rough cat's ear
Juncus bufonius	Toad rush
Juncus sp.	Rush
Lagophylla sp.	Hareleaf
*Leontodon saxitilis**	Hairy hawkbit
*Logfia gallica**	Narrowleaf cottonrose

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Scientific Name	Common Name
Lupinus nanus	Sky lupine
*Lythrum hyssopifolia**	Grass-poly
Micropus calfornicus var. *californicus*	Q-tips
Navarretia pubescens	Downy pincushion plant
Navarretia tagetina	Marigold pincushion plant
Odontostomum hartwegii	Hartweg's doll lily
*Olea europea**	Olive
*Parentucellia viscosa**	Yellow glandweed
*Petrorhagia dubia**	Windmill pink
Pinus sabiniana	Grey pine
Plagiobothrys sp.	Popcornflower
*Plantago lanceolata**	English plantain
Quercus douglasii	Blue oak
Quercus wizlisenii	Interior live oak
*Ranunculus muricatus**	Prickleseed buttercup
*Rubus armeniacus**	Himalayan blackberry
*Rumex crispus**	Curly dock
*Rumex pulcher**	Fiddle dock
*Silene gallica**	Common catchfly
*Silybum marinum**	Milk thistle
*Sisymbrium officinale**	Hedge mustard
*Torilis arvensis**	Field hedge parsley
Toxicodendron diversilobum	Poison oak
*Trifolium dubium**	Little hop clover
*Trifolium hirtum**	Rose clover
*Trifolium subterraneum**	Subterranean clover
Triteleia hyacinthina	White brodiaea
*Verbascum blattaria**	Moth mullein
*Verbascum thapsus**	Woolly mullein

Notes: Scientific nomenclature follows *Jepson Flora Project (eds.) 2023. Jepson eFlora, https://ucjeps.berkeley.edu/eflora/ [accessed on May 23, 2023].*
An "*" indicates non-native species which have become naturalized or persist without cultivation.

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Appendix B

Site Photographs

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Photo 1: Overview of southwest corner of project area. Facing southwest, 23 May 2023.

Photo 2: Overview of southwest corner of project area. Facing west, 23 May 2023.

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Photo 3: Overview of western end of project area. Facing east, 23 May 2023.

Photo 4: Overview of central portion of project area. Facing east, 23 May 2023.

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Photo 5: Overview of central portion of project area. Facing west, 23 May 2023.

Photo 6: Overview north central portion of project area. Facing north, 23 May 2023.

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Photo 7: Overview of eastern end of project area. Facing northeast, 23 May 2023.

Photo 8: Wet area below pond at eastern end of project area. Facing north, 23 May 2023.

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Appendix C

Special-Status Plant Species with Known or Potential Occurrence

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APPENDIX C
Special-Status Plant Species with Known or Potential Occurrence in the Vicinity of the RPCA La Porte Road Solar Project in Butte County, California

Scientific Name	Common Name	Status (Federal/State, CRPR)[1]	Life Form/Primary Habitat Associations/ Elevation Range (feet)/Blooming Period	Potential to Occur[2]
Carex xerophila	chaparral sedge	None/None, CRPR 1B.2	Perennial herb found in chaparral, cismontane woodland, lower montane coniferous forest (serpentine, gabbroic soils). Elevation 1,320-2,310 feet. Blooms Mar-Jun.	**Not expected to occur.** Suitable habitat for this species is not present within the project area.
Castilleja rubicundula var. *rubicundula*	pink creamsacs	None/None, CRPR 1B.2	Annual herb found in meadows and seeps, valley and foothill grasslands. Elevation 65-2,985 feet. Blooms Apr – Jun.	**Not expected to occur.** Suitable habitat for this species is not present within the project area.
Clarkia biloba ssp. *brandegeeae*	Brandegee's clarkia	None/None, CRPR 4.2 *included by request of County	Annual herb found in chaparral, cismontane woodland, and lower montane coniferous forest. Elevation 245 – 3,000 feet. Blooms (Mar)May-Jul.	**Low potential to occur.** Although potentially suitable habitat for this species may be present within the woodland patches in the Project area, focused surveys for this species were negative.
Clarkia gracilis ssp. *albicaulis*	white-stemmed clarkia	None/None, CRPR 1B.2	Annual herb found in chaparral and cismontane woodland. Elevation 805-3,560 feet. Blooms May-Jul.	**Low potential to occur.** Although potentially suitable habitat for this species may be present within the woodland patches in the Project area, the Project area is on the edge of the species range.
Clarkia mosquinii	Mosquin's clarkia	None/None, CRPR 1B.1	Annual herb with a preference for cismontane woodland and lower montane coniferous forest. Elevation 605-4,890 feet. Blooms May-Jul (Sep).	**Low potential to occur.** Suitable habitat for this species is patchy and scarce within the project area.
Fissidens pauperculus	minute pocket moss	Endangered/Rare, CRPR 1B.2	Moss found in north coast coniferous forest (damp coastal soil). Elevation 30-3,360 feet.	**Not expected to occur.** Suitable habitat for this species is not present within the project area.
Fremontodendron decumbens	Pine Hill flannelbush	Endangered/Rare, CRPR 1B.2	Perennial evergreen shrub found in chaparral, cismontane woodland (serpentine or gabbroic soils). Elevation 2,260-2,520 feet. Blooms Apr-Jun.	**Not expected to occur.** Suitable habitat and soils for this species are not present within the project area. Not observed during field survey.
Hibiscus lasiocarpos var. *occidentalis*	woolly rose-mallow	None/None, CRPR 1B.2	Perennial rhizomatous herb (emergent) found in marshes and swamps (freshwater);	**Not expected to occur.** Suitable habitat for this species is not present within the project area.

Scientific Name	Common Name	Status (Federal/State, CRPR)[1]	Life Form/Primary Habitat Associations/ Elevation Range (feet)/Blooming Period	Potential to Occur[2]
			often in rip rap on sides of levees. Elevation 0-375 feet. Blooms Jun-Sep.	
Juncus leiospermus var. *ahartii*	Ahart's dwarf rush	None/None, CRPR 1B.2	Annual herb found in valley and foothill grasslands. Elevation 100-750 feet. Blooms Mar-May.	**Low potential to occur.** Although there is potentially suitable habitat in the wetlands within and adjacent to the site, there are no documented occurrences of this species within seven miles of the site.
Juncus leoispermus var. *leoispermus*	Red Bluff dwarf rush	None/None CRPR 1B.1	Annual herb with a preference for meadows and seeps, valley and foothill grasslands and vernal pools. Elevation 115-4,100 feet. Blooms Mar-Jun.	**Low potential to occur.** Although there is potentially suitable habitat in the wetlands within and adjacent to the site, there are no documented occurrences of this species within 14 miles of the site.
Limnanthes floccosa ssp. *californica*	Butte County meadowfoam	Endangered/ Endangered, CRPR 1B.1	Annual herb found in valley and foothill grassland (mesic), vernal pools. Elevation 160-3,050 feet. Blooms Mar-May.	**Not expected to occur.** Suitable habitat for this species is not present within the project area.
Orcuttia tenuis	slender Orcutt grass	Threatened/Endangered, CRPR 1B.1	Annual herb. Vernal pools (often gravelly). Elevation 100-5,280 feet. Blooms May-Sep.	**Not expected to occur.** Suitable habitat for this species is not present within the project area.
Packera layneae	Layne's ragwort	Threatened/Rare, CRPR 1B.2	Perennial herb found in chaparral, cismontane woodland. Elevation 65-3,560 feet. Blooms Apr-Aug.	**Low potential to occur.** Suitable habitat for this species is patchy and scarce within the project area.
Paronychia ahartii	Ahart's paronychia	None/None, CRPR 1B.1	Annual herb found in cismontane woodland, valley and foothill grasses, vernal pools. Elevation 100-1,675 feet. Blooms Feb-Jun.	**Not expected to occur.** Suitable habitat for this species is not present within the project area.
Poa sierrae	Sierra blue grass	None/None, CRPR 1B.3	Perennial rhizomatous herb found in lower montane coniferous forest openings. Elevation 1,095-4,500 feet. Blooms Apr-Jul.	**Not expected to occur.** Suitable habitat for this species is not present within the project area and the site is outside of the known elevation range.
Trifolium jokerstii	Butte County golden clover	None/None, CRPR 1B.2	Annual herb found in valley and foothill grasslands and vernal pools around Lake Oroville. Elevation 165-1,575 feet. Blooms Mar-May.	**Not expected to occur.** Suitable habitat for this species is not present within the project area.

Scientific Name	Common Name	Status (Federal/State, CRPR)[1]	Life Form/Primary Habitat Associations/ Elevation Range (feet)/Blooming Period	Potential to Occur[2]
Wolffia brasiliensis	Brazilian watermeal	None/None, CRPR 2B.3	Perennial herb (aquatic) found in marshes and swamps. Elevation 65-330 feet. Blooms Apr-Dec.	**Not expected to occur.** Suitable habitat for this species is not present within the project area.

[1] **Status Legend:**
CRPR 1A: Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere
CRPR 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere
CRPR 2A: Plants Presumed Extirpated in California, But More Common Elsewhere
CRPR 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

[2] **Definitions Regarding Potential for Occurrence**

- Not expected to occur – Habitat on and adjacent to the site is unsuitable for the species life history requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, soils, site history, and disturbance regime).
- Low – Few of the habitat components meeting the species life history requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of poor quality. The species is not likely to found on the site.
- Moderate – Some of the habitat components meeting the species life history requirements are present, there may be documented occurrences of the species in the vicinity of the site, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- High – All of the habitat components meeting the species life history requirements are present, there may be documented occurrences of the species on or adjacent to the site and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- Present – Species was observed on the site.

Sources:

California Native Plant Society (CNPS). 2022. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society. Sacramento, CA. Accessed September 2022.

APPENDIX - C

Noise Study
January 15, 2024

DUDEK
621 CHAPALA STREET
SANTA BARBARA, CALIFORNIA 93101
T 805.963.0651 F 805.963.2074

MEMORANDUM

To:	RPCA Solar 11, LLC
From:	Mark Storm, INCE Bd. Cert. (Dudek); Nick Segovia (Dudek)
Subject:	La Porte Road Solar + Battery Project Noise and Vibration Assessment
Date:	January 15, 2024
cc:	David Hochart, (Dudek); Brian Madigan, AICP (Renewable Properties)
Attachment(s):	Figure 1 – Project Location Figure 2 – Project Predicted Stationary Source Operation Noise (without 12'-tall Noise Barrier) Figure 3 – Project Predicted Stationary Source Operation Noise (with 12'-tall BESS facility Noise Barrier) Attachment A – Construction Noise Prediction Worksheets Attachment B – Operation Noise Prediction Model Inputs

Dudek is pleased to present RPCA Solar 11, LLC (Client) with the following noise and vibration technical analyses for the proposed La Porte Road Solar + Battery Project (Project) located in the County of Butte (County) and the unincorporated community of Bangor. This memorandum (memo) presents quantitative estimates of Project onsite construction and post-construction operational noise emission to the surrounding sound environment, which consists of existing residential land uses on "residential/agricultural" zoned parcels along La Porte Road and Los Verjeles Road. Construction vibration is also estimated using Federal Transit Administration (FTA) techniques. The potential for significant impacts from construction and operation of the Project is assessed in accordance with the California Environmental Quality Act (CEQA) Guidelines and considers relevant County noise regulations. The contents and organization of this memorandum are as follows: Executive Summary, Project Description, Assessment Framework, Impact Assessment, and References Cited.

1 Executive Summary

As analyzed herein, potential Project construction and operation-related noise and vibration impacts to the surrounding community would be considered less than significant on the basis of compliance with County standards and FTA guidance. Post-construction Project operation noise is predicted to comply with the standards measured by dBA energy-averaged noise level (L_{eq}) at the noise sensitive receptor property lines during the daytime (50 dBA L_{eq} from 7 a.m. to 7 p.m.), evening (45 dBA L_{eq} from 7 p.m. to 10 p.m.), and nighttime (40 dBA L_{eq} from 10 p.m. to 7 a.m.), when areas containing major battery energy storage system (BESS) noise-producing onsite equipment (e.g., battery containers and inverters) are surrounded by 12-foot-tall solid walls. Project-attributed construction noise and groundborne vibration exposure levels at the nearest noise-sensitive receiver (NSR), a residence 20 feet

southwest of the Project boundary on La Porte Road, are predicted to be within FTA guidance thresholds with the implementation of a temporary 8-foot-tall noise barrier during construction.

2 Project Description

The Project will install approximately 7,776 solar modules and 24 string inverters to convert the sun's energy into usable, alternating current (AC) power, and will generate up to 3.0 megawatts (MW) AC (4.2 MW of direct current [DC]) of clean, reliable solar energy when complete. The battery energy storage system (BESS) will charge and discharge a total of 3 MW AC of energy for up to a four-hour duration. The Project will interconnect PG&E's pre-existing electrical distribution system located on site. The Project site, as appearing in Figure 1, encompasses 22.52 acres of an 82-acre parcel and is located immediately east of La Porte Road, approximately 0.30 miles northeast of Oroville Bangor Highway and Los Verjeles Road. The Project encompasses a single parcel, designated by Assessor's Parcel Number 028-240-061 (See Figure 1). Figure 1 shows only the project location, whereas the current site plan is reflected in Figures 2 and 3 (as underlays for the predicted operation noise contours). The Project would include the following components, which are described in more detail following the bulleted list:

- **Solar Modules and String Inverters:** Approximately 7,776 solar modules and 24 string inverters to convert the sun's energy into usable, alternating current (AC) power, and will generate up to 3.0 megawatts (MW) AC (4.2 MW of direct current [DC]) of clean, reliable solar energy when complete.
- **Battery Energy Storage Facility:** 4 battery energy storage enclosures and appurtenances would be constructed that would provide energy storage capacity and dispatch for the electric grid.
- **Power Inverters and Power Stations:** 4 power inverters and 2 power stations (containing one medium-voltage [MV] transformer, one weather station, and one DAS, each) to convert between alternating current and direct current.
- **Utility Connections:** The point of interconnection (POI) between the solar arrays, battery storage equipment and the existing PG&E grid will be preceded by 4 utility poles.
- **Operations and Maintenance:** The Project will be unmanned and remotely operated, generating 6 regular trips (one person in one truck) annually to handle operational responsibilities.
- **Site Access and Security:** On-site access driveways and perimeter security fencing will be provided for the Project.

The facilities are intended to operate year-round and would be available to receive or deliver energy 24 hours a day and 365 days a year.

3 Assessment Framework

3.1 Acoustical Fundamentals

The following subsections provide the reader a summary of acoustical terminology and concepts that the foregoing analyses will use to evaluate potential noise and vibration impacts associated with the proposed Project.

3.1.1 Sound, Noise, and Acoustics

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a hearing organ, such as a human ear. Noise is defined as loud, unexpected, or annoying sound.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receptor, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receptor determine the sound level and characteristics of the noise perceived by the receptor. The field of acoustics deals primarily with the propagation and control of sound.

Frequency

Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low-frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or Hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz (kHz), or thousands of Hertz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

Sound Pressure Levels and Decibels

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 huge 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 decibels (dB). The threshold of hearing for young people is about 0 dB, which corresponds to 20 mPa.

Addition of Decibels

Because decibels are logarithmic units, SPL cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3-dB 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 dB higher than 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 dB—rather, they would combine to produce 73 dB. Under the decibel scale, three sources of equal loudness together produce a sound level 5 dB louder than one source.

A-weighted Decibels

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the SPL in that range. In general, people are most sensitive to the frequency range of 1,000–8,000 Hz and perceive sounds within that range better than sounds of the same amplitude in higher or lower frequencies. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies. Then, an "A-weighted" sound level (expressed in units of dBA) can be computed based on this information.

The A-weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. Other weighting networks have been devised to address high noise levels or other special problems (e.g., B-, C-, and D-scales), but these scales are rarely used in conjunction with highway-traffic noise. Noise levels for traffic noise reports are typically reported in terms of A-weighted decibels or dBA. Table 1 describes typical A-weighted noise levels for various noise sources.

Table 1. Typical A-Weighted Noise Levels for Common Indoor and Outdoor Sources

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Diesel truck at 50 feet at 50 mph	85	Food blender at 3 feet
	80	Garbage disposal at 3 feet
Noisy urban area, daytime	75	—
Gas lawn mower, 100 feet	70	Vacuum cleaner at 10 feet
Commercial area	65	Normal speech at 3 feet
Heavy traffic at 300 feet	60	—
	55	Large business office
Quiet urban daytime	50	Dishwasher next room
	45	—
Quiet urban nighttime	40	Theater, large conference room (background)
Quiet suburban nighttime	35	—
	30	Library
Quiet rural nighttime	25	Bedroom at night, concert hall (background)

Source: Caltrans 2013.

Human Response to Changes in Noise Levels

As discussed above, doubling sound energy results in a 3-dB increase in sound. However, given a sound level change measured with precise instrumentation, the subjective human perception of a doubling of loudness will usually be different than what is measured.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear is able to discern 1-dB changes in sound levels, when exposed to steady, single-frequency ("pure-tone") signals in the mid-frequency (1,000 Hz–8,000 Hz) range (Caltrans 2013). In typical noisy environments, changes in noise of 1 to 2 dB are generally not perceptible. However, it is widely accepted that people are able to begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5-dB increase is generally perceived as a distinctly noticeable increase, and a 10-dB increase is generally perceived as a doubling of loudness. Therefore, a doubling

of sound energy (e.g., doubling the volume of traffic on a highway) that would result in a 3-dB increase in sound, would generally be perceived as barely detectable by average healthy human hearing.

Noise Descriptors

Noise in our daily environment fluctuates over time at varying rates. Various noise descriptors have been developed to describe time-varying noise levels. The following are the noise descriptors are utilized in this analysis.

- **Equivalent Sound Level** (L_{eq}): L_{eq} represents an energy average of the sound level occurring over a specified period. The 1-hour A-weighted equivalent sound level ($L_{eq[h]}$) is the energy average of A-weighted sound levels occurring during a one-hour period, and is the basis for noise abatement criteria (NAC) used by Caltrans and the Federal Highway Administration (FHWA). Note that L_{eq} is not an arithmetic average of varying dB levels over a period of time, it accounts for greater sound energy represented by higher decibel contributions.
- **Percentile-Exceeded Sound Level** (L_{xx}): L_{xx} represents the sound level exceeded for a given percentage of a specified period (e.g., L_{10} is the sound level exceeded 10% of the time, and L_{90} is the sound level exceeded 90% of the time).
- **Maximum Sound Level** (L_{max}): L_{max} is the highest instantaneous sound level measured during a specified period.
- **Day-Night Level** (L_{dn}): L_{dn} is the energy average of A-weighted sound levels occurring over a 24-hour period, with a 10-dB penalty applied to A-weighted sound levels occurring during nighttime hours between 10 p.m. and 7 a.m.
- **Community Noise Equivalent Level** (CNEL): Similar to L_{dn}, CNEL is the energy average of the A-weighted sound levels occurring over a 24-hour period, with a 10-dB penalty applied to A-weighted sound levels occurring during the nighttime hours between 10 p.m. and 7 a.m., and a 5-dB penalty applied to the A-weighted sound levels occurring during evening hours between 7 p.m. and 10 p.m.

Sound Propagation

When sound propagates over a distance, it changes in level and frequency content. The manner in which noise reduces with distance depends on the following factors.

- **Geometric Spreading** – Sound from a localized source (i.e., an ideal point source) propagates uniformly outward in a spherical pattern (or hemispherical when near a surface). The sound level attenuates (or decreases) at a rate of 6 decibels for each doubling of distance from a point source. Roadways consist of several localized noise sources on a defined path, and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 decibels for each doubling of distance from a line source.
- **Ground Absorption** – The propagation path of noise from a sound emission source to a receptor is usually horizontal and proximate to the ground. Under these conditions, noise attenuation from ground absorption and reflective wave canceling can add to the attenuation associated with geometric spreading. For acoustically "hard" paths over which sound may traverse (i.e., sites with a reflective surface between the source and the receptor, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or "soft" sites (i.e., those sites with an absorptive ground surface between the

source and the receptor, such as fresh-fallen snow, soft dirt, or dense vegetative ground cover), an additional ground-attenuation value of 1.5 decibels per doubling of distance is normally assumed. When added to cylindrical spreading for line source sound propagation, the excess ground attenuation results in an overall drop-off rate of 4.5 decibels per doubling of distance.

- Atmospheric Effects – Receptors located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound pressure levels can also be increased at large distances (e.g., more than 500 feet) due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects when distances between a source and receptor are large.
- Shielding by Natural or Human-Made Features – A large object or barrier in the path between a noise source and a receptor can substantially attenuate noise levels at the receptor. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receptor specifically to reduce noise. A barrier that breaks the line of sight between a source and a receptor will typically result in at least 5 dB of noise reduction. Taller barriers provide increased noise reduction. While a line of trees may visually occlude the direct line between a source and a receptor, its actual noise-reducing effect is usually negligible because it does not create a solid barrier. Deep expanses of dense wooded areas, on the other hand, can offer noise reduction under the right conditions.

3.1.2 Vibration Characteristics

Vibration is oscillatory movement of mass (typically a solid) over time. It is described in terms of frequency and amplitude and, unlike sound, can be expressed as displacement, velocity, or acceleration. For environmental studies, vibration is often studied as a velocity that, akin to the discussion of sound pressure levels, can also be expressed in dB as a way to cast a large range of quantities into a more convenient scale. Vibration impacts to buildings are generally discussed in terms of inches per second (ips) peak particle velocity (PPV), which will be used herein to discuss vibration levels for ease of reading and comparison with relevant standards. Vibration can also be annoying and thereby impact occupants of structures, and vibration of sufficient amplitude can disrupt sensitive equipment and processes (Caltrans 2020), such as those involving the use of electron microscopes and lithography equipment. Common sources of vibration within communities include construction activities and railroads. Groundborne vibration generated by construction projects is usually highest during pile driving, rock blasting, soil compacting, jack hammering, and demolition-related activities where sudden releases of subterranean energy or powerful impacts of tools on hard materials occur. Depending on their distances to a sensitive receptor, operation of large bulldozers, graders, loaded dump trucks, or other heavy construction equipment and vehicles on a construction site also have the potential to cause high vibration amplitudes. The maximum vibration level standard used by the California Department of Transportation (Caltrans) for the prevention of structural damage to typical residential buildings is 0.3 ips PPV (Caltrans 2020). For human annoyance, Caltrans guidance indicates that a more stringent threshold of 0.2 ips PPV due to continuous vibration (e.g., nearby roadway traffic) would be “annoying”. Vibration velocity limits for transient or single events tend to be less stringent than those for continuous or “steady-state” vibration sources.

3.2 Environmental Setting

The Project site is surrounded by land uses designated as "Residential" and "Agricultural," and is surrounded by rural residential properties and the adjacent Bangor Ranch Vineyard and Winery. Consequently, acoustical contributors affecting noise levels on the Project site and in its vicinity include sounds from the activity at the nearby vineyard/winery, vehicular traffic on paved and unpaved streets (e.g., La Porte Road and nearby driveways), and the indistinct background din representing the amalgam of other distant and/or unseen natural and man-made noises.

3.2.1 Studied Sensitive Receptors

Noise- and vibration-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas are typically considered noise- and vibration-sensitive and may warrant unique measures for protection from intruding noise. Based on this understanding, the noise-sensitive receptor (NSR) nearest to the Project area is a home east of the intersection of La Porte Road and Webb Creek Circle, immediately southwest of the Project site.

3.3 Regulatory Setting

3.3.1 Federal Regulations and Guidance

Federal Transit Administration

In its Transit Noise and Vibration Impact Assessment guidance manual, the Federal Transit Administration (FTA) recommends a daytime construction noise level threshold of 80 dBA L_{eq} over an 8-hour period (FTA 2018) when detailed construction noise assessments are performed to evaluate potential impacts to community residences surrounding a project. Although this FTA guidance is not a regulation, it can serve as a quantified standard in the absence of such noise limits at the state and local jurisdictional levels.

3.3.2 Local Regulations and Guidance

Butte County Noise Control Ordinance

Chapter 41A-7 in the Butte County Code of Ordinances sets forth the following noise standards for noise sensitive exterior areas as described below and shown in Table 2:

a) The following noise standards, unless otherwise specifically indicated in this chapter, shall apply to all noise sensitive exterior areas within Butte County.

Table 2. Butte County Exterior Noise Standards

Noise Level Descriptor	Daytime (7 a.m. to 7 p.m.)		Evening (7 p.m. to 10 p.m.)		Nighttime (10 p.m. to 7 a.m.)	
	Land Use Designation					
	Urban	Non-Urban	Urban	Non-Urban	Urban	Non-Urban
Hourly Average (L_{eq})	55	50	50	45	45	40
Maximum (L_{max})	70	60	60	55	55	50

Source: Butte County Code of Ordinances, Chapter 41A-7 – Noise Control
Notes: "Non-Urban designations" are Agriculture, Timber Mountain, Resource Conservation, Foothill Residential and Rural Residential. All other designations are considered "urban designations" for the purposes of regulating noise exposure.

b) Each of the noise limits specified in subdivision (a) of this section shall be reduced by five (5) dBA for recurring impulsive noise, simple or pure tone noise, or for noises consisting of speech or music.

c) Noise level standards, which are up to five (5) dBA less than those specified above, based upon determination of existing low ambient noise levels in the vicinity of the project site may be imposed.

d) In urban areas, the exterior noise level standard shall be applied to the property line of the receiving property. In non-urban areas, the exterior noise level standard shall be applied at a point one hundred (100) feet away from the residence or at the property line if the residence is closer than one hundred (100) feet. The above standards shall be measured only on property containing a noise sensitive land use.

The Butte County Code of Ordinances does not explicitly set forth noise limits for construction activity, but rather provides exemptions for noise sources associated with construction, demolition, paving or grading of any real property located within one thousand (1,000) feet of residential uses, provided that such activities do not take place between the following hours:

- Sunset to sunrise on weekdays and non-holidays;
- Friday commencing at 6:00 p.m. through and including 8:00 a.m. on Saturday, as well as not before 8:00 a.m. on holidays;
- Saturday commencing at 6:00 p.m. through and including 10:00 a.m. on Sunday; and,
- Sunday after the hour of 6:00 p.m.

Butte County General Plan

The Health and Safety Element of the Butte County General Plan 2030 establishes a 60 dBA (L_{dn} or CNEL) limit for exterior noise levels at residential land uses and sets forth maximum allowable noise exposure limits identical to the exterior noise standards shown in Table 2 for non-transportation sources. The Health and Safety Element also establishes the following:

HS-P1.1. New development projects proposed in areas that exceed the land use compatibility standards in Tables HS-2 and HS-3 shall require mitigation of noise impacts.

HS-P1.2. Noise from transportation sources shall not exceed land use compatibility standards in Table HS-2.

HS-P1.3. New noise-sensitive land uses shall not be located within the 55 L_{dn} contour of airports, roadways, and other noise generating uses, with the exception of the Chico Municipal Airport.*

HS-P1.4. New noise-sensitive land uses shall not be located within the 60 L_{dn} contour of the Chico Municipal Airport.*

HS-P1.5. Noise from new recreational activities and events shall not exceed 60 dB at the nearest noise sensitive land use.

HS-P1.6. Applicants proposing a new noise-producing development project near existing or planned noise-sensitive uses shall provide a noise analysis prepared by an acoustical specialist with recommendations for design mitigation.

HS-P1.7. Applicants for discretionary permits shall be required to limit noise-generating construction activities located within 1,000 feet of residential uses to daytime hours between 7:00 a.m. and 6:00 p.m. on weekdays and non-holidays.

HS-P1.8. Noise from generators shall be regulated near existing and future residential uses.

HS-P1.9. The following standard construction noise control measures shall be required at construction sites in order to minimize construction noise impacts:

a) Equip all internal combustion engine driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.

b) Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area.

c) Utilize quiet air compressors and other stationary noise generating equipment where appropriate technology exists and is feasible.

HS-P1.10. To reduce impacts from ground borne vibration associated with rail operations, residences or other vibration-sensitive buildings shall be sited at least 100 feet from the centerline of the nearest railroad track whenever feasible. Development of vibrationsensitive buildings, such as those containing precision medical and industrial equipment or television, radio and recording studios, within 100 feet from the centerline of the nearest railroad track shall require a study demonstrating that groundborne vibration issues associated with rail operations have been adequately addressed through building siting or construction techniques.

3.4 Thresholds of Significance

The following significance criteria, included for analysis in this acoustical assessment, are based on Appendix G of the State CEQA Guidelines (14 CCR 15000 et seq.), and will be used to determine the significance of potential noise impacts. Noise impacts would be significant if the Proposed Project would:

A. Result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
B. Result in generation of excessive groundborne vibration or groundborne noise levels; and
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, result in exposure of people residing or working in the project area to excessive noise levels.

Quantitative thresholds of significance have been established for the purposes of this analysis based on the local polices and regulations described in Section 3.3, and are listed below.

- Construction Noise – During allowable hours of construction activity per Chapter 41A-7 in the Butte County Code of Ordinances, the FTA recommends a limit of 80 dBA L_{eq} over an 8-hour period during daytime hours at a receiving residential land use.

- Construction Vibration – For building damage risk to these existing offsite residential buildings, the threshold would be 0.3 inches per second PPV per Caltrans guidance with respect to continuous or intermittent sources (e.g., construction activities). Building occupant annoyance within such a structure would be 0.2 inches per second PPV.

- Project-attributed Stationary Source Noise Emission to the Community – The Project site is designated as Rural Residential by the County General Plan and is zoned as Rural Residential in the Butte County Zoning Ordinance. Chapter 41A-7 in the Butte County Code of Ordinances prescribes exterior noise limits at the property line of the noise sensitive receptor, which are 50 dBA L_{eq} from 7 a.m. to 7 p.m., 45 dBA L_{eq} from 7 p.m. to 10 p.m., and 40 dBA L_{eq} from 10 p.m. to 7 a.m.

- Exposure of Project Workers or Visitors to Excessive Aviation Noise – Typically, project area where outdoor workers or visitors may be present that intersects the 65 dBA CNEL aviation noise contour of a public or private airport would be considered a potentially significant noise impact.

4 Impact Assessment

4.1 Approach and Methodology

4.1.1 Construction

The following summarized methodology and assumptions were adopted to reasonably estimate aggregate Project-attributed construction noise exposure at the following nearest offsite County NSR: an existing home 20 feet southwest of the Project Site, east of the intersection of La Porte Road and Webb Creek Circle.

The predictive analysis herein locates multiple sound-emitting sources (i.e., operating stationary and mobile equipment) associated with each distinct construction phase as close as the nearest Project site boundary with respect to the NSR position—a horizontal span of approximately 20 feet. This approach is conservative and "worst case", as construction equipment would normally be operating across the entire Project area as work proceeds. Only under a "worst case" would multiple pieces of heavy construction equipment be concurrently operating as close as 20 feet to the NSR and its neighbors along La Porte Road. The construction activities that are expected to occur, grouped by phase, are shown in Table 3.

Table 3. Construction Scenario Assumptions

Construction Phase	Equipment		
	Equipment Type	Quantity	Usage Hours per Day
Site Preparation	Grader	2	8
	Front End Loader	2	8
	Backhoe	2	8
	Skid-steer	2	8
Project BESS Site Preparation	Dozer	2	8
	Backhoe	2	8
Grading	Grader	2	8
	Compactor (ground)	2	8
	Roller	2	8
	Front End Loader	2	8
	Backhoe	2	8
	Skid-steer	2	8
Project BESS Site Grading	Dozer	2	8
	Roller	2	8
	Backhoe	2	8
Battery Container Installation	Compressor (air)	2	8
	Generator	4	8
	Excavator	2	8
	Backhoe	2	8
	Gradall	2	8
	Crane	2	8
	Skid-steer	2	8

Table 3. Construction Scenario Assumptions

Construction Phase	Equipment		
	Equipment Type	Quantity	Usage Hours per Day
	Excavator	2	8
	Compactor (ground)	2	8
Project PV Solar Array Installation	Crane	2	8
	Man Lift	6	8
	Excavator	2	8
	Generator	2	8
	Roller	2	8
	Auger Drill Rig	2	8
	Gradall	2	8
	Dozer	2	7
	Skid-steer	2	8
	Backhoe	4	6
	Slurry Trenching Machine	4	5
	Compressor (air)	2	8
Decommissioning	Concrete Saw	2	8
	Crane	2	8
	Dozer	2	8
	Backhoe	2	8

Using the roster of Table 3 as guidance for input parameters, and as detailed in the worksheets appearing in Attachment A, combined construction noise emission for each listed phase was predicted with a model that emulates the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) and utilizes its reference sound level data and "acoustical usage factors" by equipment type (FHWA 2006).

Vibration

Groundborne vibration attenuates rapidly, even over short distances. The attenuation of groundborne vibration as it propagates from source to receptor through intervening soils and rock strata can be estimated with expressions found in FTA and Caltrans guidance. To examine potential building damage risk and thus use PPV as the evaluation metric, vibration velocity level can be estimated with the following expression (FTA 2018):

$$PPV_{rcvr} = PPV_{ref} * (25/D)^{n}$$

where PPV_{rcvr} is the predicted vibration velocity at the receiver position, PPV_{ref} is the reference value at 25 feet from the vibration source, D is the actual horizontal distance to the receiver, and "n" is the Wiss exponent that FTA defines as 1.5 to generally characterize the propagation of vibration through soil/strata between the source and the receptor position.

4.1.2 Operations

Roadway Traffic Noise

Because routine operation of the Project will not require many onsite personnel, its potentially additive effects on pre-existing nearby roadway traffic volumes such as La Porte Road and Los Verjeles Road are expected to be modest or even negligible; hence, changes to roadway traffic noise exposures experienced by the surrounding commercial/industrial community would be qualitatively considered less than significant impacts and are not studied further herein.

Stationary Source Noise

Using DataKustik's CadnaA software, which models three-dimensional outdoor sound propagation based on International Organization for Standardization (ISO) 9613-2 algorithms and relevant reference data, an operational scenario of the proposed project was modeled for purposes of this analysis. The modeled scenario included the following operating assumptions for the anticipated noise sources: four BESS enclosures and corresponding medium-voltage (MV) transformers. Facilities are expected to operate at any time, either discharging or charging onsite batteries, up to 24 hours a day, 365 days a year. Noise emission from two inverters that collect electricity from the photo-voltaic (PV) solar panel arrays is also included in the sound propagation model. Due to PV solar panel string tracking motors having relatively small power ratings and operating intermittently (i.e., not continuously), their noise contribution would be considered not substantial compared to the aforesaid BESS components and PV solar facility inverters and are therefore not included herein. The predictive analysis assumes that all the above equipment is operating under a charging or discharging condition that may last up to a full continuous hour. For purposes of this preliminary analysis, the overall A-weighted levels appearing in Table 4 were used to define the individual project sound sources.

Table 4. Sound Power Levels for the Modeled Individual Sources of Outdoor Noise Emission

Source	A-weighted Sound Level per Octave Band Center Frequency (OBCF in Hertz [Hz])									Overall Sound Level (dBA)
	31.5	63	125	250	500	1k	2k	4k	8k	
BESS multi-segment cooling systems [a]	54.4	67.4	70.4	77.4	80.4	83.4	79.4	77.4	74.4	87.6
BESS inverter – long side [b]	34.2	53.2	65.2	67.2	73.2	70.2	66.2	61.2	52.2	76.6
BESS inverter – right side [b]	29.8	44.4	53.4	63.1	67.6	72.4	69.3	63.7	53.7	75.6
PV solar array inverter [c]	25.3	39.9	48.9	58.6	63.1	67.9	64.8	59.2	49.2	71.1

Notes: OBCF = Octave Band Center Frequency; dBA = A-weighted decibels; BESS = battery energy storage system; k = kilohertz.
[a] based on a seven-segment POWIN "centipede"
[b] based on CAB1000 noise emission test data
[c] based on Maddox data (per NEMA for 1500kV)

These above-listed reference sound power (L_w) levels were used to define area sources of sound emission in the CadnaA computer model space with respect to an arrangement of rendered "building" blocks that depict the

rectangular arrangement of equipment on the Project site plan. In addition to the above sound source inputs, the following assumptions, features, and parameters are included in this CadnaA-supported stationary noise source assessment:

- Ground effect acoustical absorption coefficient equal to 0.8, which represents a mix of ground types over which Project sound would travel across and beyond the Project site: acoustically absorptive "soft" vegetated ground cover, loose soils, and granular aggregate; and acoustically reflective roadway surfaces;
- Reflection order of 1, which allows for a single reflection of sound paths on encountered structural surfaces such as the modeled battery enclosure row masses;
- Conservative consideration of topography: both the Project site and the grade of the nearest residential community to the northeast are, on average, at the same elevation above sea level;
- Calm meteorological conditions (i.e., no wind) with 68 degrees Fahrenheit and 70% relative humidity; and
- For the noise reduction scenario, a twelve-foot perimeter wall surrounds the BESS equipment on the southwestern portion of the Project site, featuring an opening on the northeastern corner for vehicle access to onsite equipment.

Details of the CadnaA modeling input parameters (e.g., modeled sources) can be found in Attachment B. As will be illustrated in the following Section 4.2, the prediction model results show that the site plan would be consistent with required County noise level limits, under the condition that the proposed noise barrier is implemented.

Vibration

Once operational, the Project would not be expected to feature major onsite producers of groundborne vibration. Anticipated electro-mechanical systems like the battery enclosure thermal management systems are designed and manufactured to feature rotating and reciprocating components (e.g., fans and refrigeration compressors) that are well-balanced with isolated vibration within or external to the equipment casings. On this basis, potential vibration impacts due to Project operation are not expected to be significant and have not been evaluated herein.

4.2 Analysis Results

The following noise and vibration impact analysis sections are arranged in the same order as the three aforementioned CEQA Appendix G checklist assessment criteria with abbreviated headings.

A. Generation of substantial temporary or permanent increase in noise levels?

Onsite Construction Noise (Temporary)

Using the RCNM-emulating Excel workbook, the predicted noise level exposure from the proposed construction activities at the nearest studied residential NSR are summarized in Table 5. The nearest distance represents the closest distances from the NSR to each construction phase area on the project site. The centroid distance represents the distances from the NSR to the center of each constructions phase area on the project site. Although the prediction results in Table 5 are presented as 8-hour L_{eq} values, they are essentially equivalent to hourly L_{eq} values since Table 3 indicates that construction equipment would operate eight hours during a typical work shift within the FTA's recommended construction period.

Table 5. Unmitigated Onsite Construction Noise Model Results Summary

Construction Phase (from Table 3)	Construction Noise (dBA 8-hour L_{eq}) at Nearest Noise-Sensitive Receptor (NSR)	
	Nearest Distance	Centroid Distance
Site Preparation	89.4	57.0
Project BESS Site Preparation	85.4	53.0
Grading	90.1	57.7
Project BESS Site Grading	86.3	53.9
Battery Container Installation	90.5	58.2
Project PV Solar Array Installation	91.8	60.1
Decommissioning	90.8	58.4

Notes: See Attachment C for complete results.

As shown in Table 5, the average construction noise levels at the nearest NSR (20 feet southwest of the Project site) would range from 85.4 to 91.8 dBA 8-Hour L_{eq}. These noise levels are considered to be a peak exposure, not applicable more than 10-15% of the total construction period, only while the construction activity is taking place along the southwestern site boundary (i.e., closest to the nearest offsite receiver). With average construction noise levels reaching up to 91.8 dBA 8-hour L_{eq}, modeled construction noise without a temporary noise barrier implemented would exceed the FTA's recommended 80 dBA 8-hour L_{eq} threshold by up to 11.8 dBA L_{eq} at the nearest NSR. To avoid such an impact, a temporary noise barrier is recommended during construction to minimize construction noise during each respective phase; as shown in Table 6, further analysis was performed to determine the appropriate height for a noise barrier during construction.

Table 6. Onsite Construction Noise Model Results Summary with Temporary 8'-Tall Noise Barrier

Construction Phase (from Table 5)	Construction Noise (dBA 8-hour L_{eq}) at Nearest Noise-Sensitive Receptor (NSR)	
	Nearest Distance	Centroid Distance
Site Preparation	75.8	57.0
Project BESS Site Preparation	71.8	53.0
Grading	76.5	57.8
Project BESS Site Grading	72.7	53.9
Battery Container Installation	76.9	58.3
Project PV Solar Array Installation	78.3	60.2
Decommissioning	77.2	58.5

As shown in Table 6, with the implementation of an 8-foot-tall temporary perimeter noise barrier, the average construction noise levels at the nearest NSR would range from 71.8 to 78.3 dBA 8-hour L_{eq}, and therefore would be below the FTA's recommended 80 dBA 8-hour L_{eq} threshold. On this basis, with the implementation of a temporary 8-foot-tall noise barrier, construction noise levels would be considered **a less than significant impact**. Nevertheless, and despite predicted compliance with FTA guidance and while exempted from Butte County noise level standards during allowable hours as summarized in Section 3.3.2, construction noise exposure levels at the surrounding nearest offsite sensitive receptors (e.g., homes) would be clearly audible and substantially higher than pre-existing outdoor ambient sound levels.

Operation Noise

Stationary Sources

Predicted noise exposure levels attributed to concurrent operation of Project onsite stationary sources (i.e., battery enclosure cooling systems, medium-voltage inverters/transformers) as modeled without mitigation implemented appear in Table 7. Figure 2 correspondingly illustrates (for this same modeled full operation scenario) predicted Project stationary equipment operation sound levels across a horizontal plane approximately five feet above grade (i.e., a first-floor or pedestrian listening elevation) over the Project site and beyond into the surrounding vicinity.

Table 7. Unmitigated Project Operation Noise Prediction Model Results Summary

Modeled Receptor	Modeled Receptor Distance from Project Boundary	Predicted Operation Noise (dBA hourly L_{eq}) at Indicated Modeled Receptor
NSR1	130 feet Northwest	31.0
NSR2	100 feet Northwest	27.0
NSR3	40 feet North	27.1
NSR4	20 feet South	41.4
NSR5	50 feet West	47.0
NSR6	530 feet South	28.3
Bangor Ranch Vineyard and Winery	20 feet South	34.5

As shown in Table 7, the predicted levels at the studied noise-sensitive receptor locations would exceed the County's 40 dBA hourly L_{eq} nighttime noise threshold at two of the studied representative offsite receptor locations; therefore, to reach operational noise levels below the County's nighttime noise threshold, further analysis was performed to include a proposed 12-foot-tall perimeter noise barrier surrounding the onsite BESS equipment, for which the results are shown in Table 8. Figure 3 correspondingly illustrates (for this same modeled full operation scenario) predicted Project stationary equipment operation sound levels across a horizontal plane approximately five feet above grade (i.e., a first-floor or pedestrian listening elevation) over the Project site and beyond into the surrounding vicinity.

Table 8. Project Operation Noise Prediction Model Results Summary with 12'-Tall Noise Barrier

Modeled Receptor	Modeled Receptor Distance from Project Boundary	Predicted Operation Noise (dBA hourly L_{eq}) at Indicated Modeled Receptor
NSR1	130 feet Northwest	26.6
NSR2	100 feet Northwest	23.2
NSR3	40 feet North	23.9
NSR4	20 feet South	35.8
NSR5	50 feet West	39.9
NSR6	530 feet South	27.5

Table 8. Project Operation Noise Prediction Model Results Summary with 12'-Tall Noise Barrier

Bangor Ranch Vineyard and Winery	20 feet South	34.1

As shown in Table 8, with the implementation of a 12-foot-tall perimeter noise barrier surrounding the onsite BESS equipment, the predicted levels at the studied noise-sensitive receptor locations would not exceed the County's 40 dBA hourly L_{eq} nighttime noise threshold; therefore, potential environmental noise impact associated with Project operation under this noise-reduced scenario would be considered **less than significant**. Should a 12'-tall wall not be feasible to implement as part of Project design, alternative means of noise reduction could include shortening the wall height and offsetting the resulting drop in expected barrier insertion loss with noise reduction applied directly on or in the vicinity of the BESS equipment—such as acoustically-lined vent shrouds, passive attenuators, etc. that are commonly used on HVAC systems, generators, and other electrical equipment.

Operation noise associated with the proposed Project's utility connections would be limited to small or negligible changes to the pre-existing outdoor ambient noise conditions, due to the connections being underground. Thus, additional audible corona noise from the Proposed Project would represent a less than significant impact.

B. Generation of excessive groundborne vibration?

Onsite Construction Activities

Using the expression described in Section 4.1.1, grading at the Project site boundary would appear to occur as close as 25 feet to the nearest offsite residential structure. At this distance, and using a reference groundborne PPV of 0.21 ips for the roller at a distance of 25 feet (FTA 2018), the estimated PPV at the receiving building façade can be estimated as follows:

$$PPV_{rcvr} = 0.21*(25/35)^{1.5} = 0.13 \text{ ips}$$

The predicted groundborne vibration velocity level is below the Caltrans guidance-based 0.3 ips PPV threshold for avoiding building damage to older residential structures, as well as the 0.2 ips PPV threshold for occupant annoyance.

Subsequent onsite construction activities would involve greater quantities of equipment but would be less vibratory than a roller and/or their distances would be much greater than this twenty-five horizontal foot distance between the Project site and the nearest residential building façade. Hence, groundborne vibration propagating from these more distant sources of onsite vibration would be substantially less than the preceding estimates and the Caltrans guidance-based vibration exposure threshold and thus. expected to be a **less than significant**.

C. Expose people to excessive aviation noise levels?

There are no public airports or private airfields within 2 miles of the project, and the Project area is far from any aviation traffic noise contour greater than 65 dBA CNEL. Therefore, construction workers and post-construction Project operational or maintenance staff onsite would not be exposed to excessive noise levels, and the corresponding noise impact would be considered less than significant.

5 References Cited

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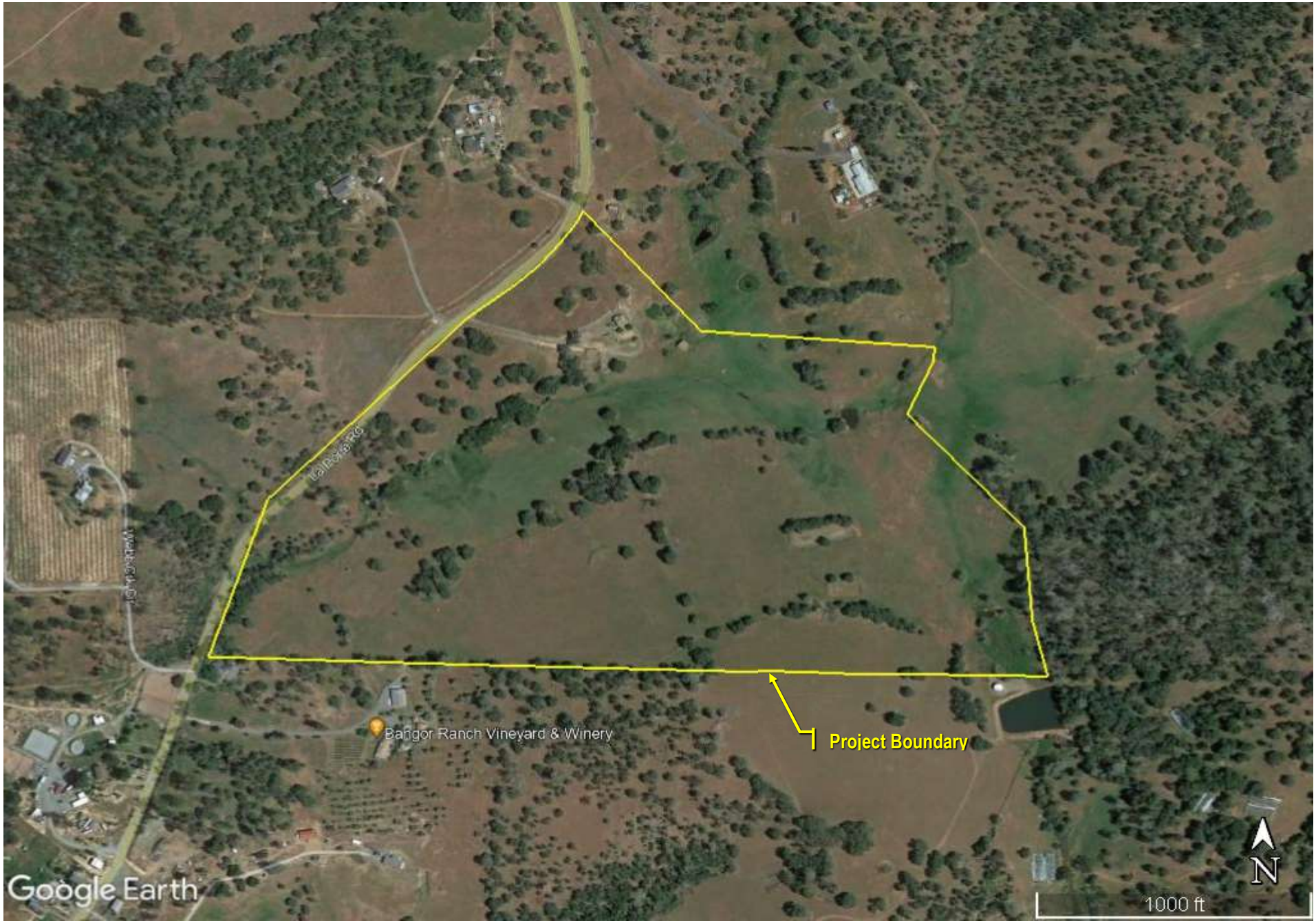


SOURCES: Google 2023; La Porte Solar + Battery 2023; Dudek 2024

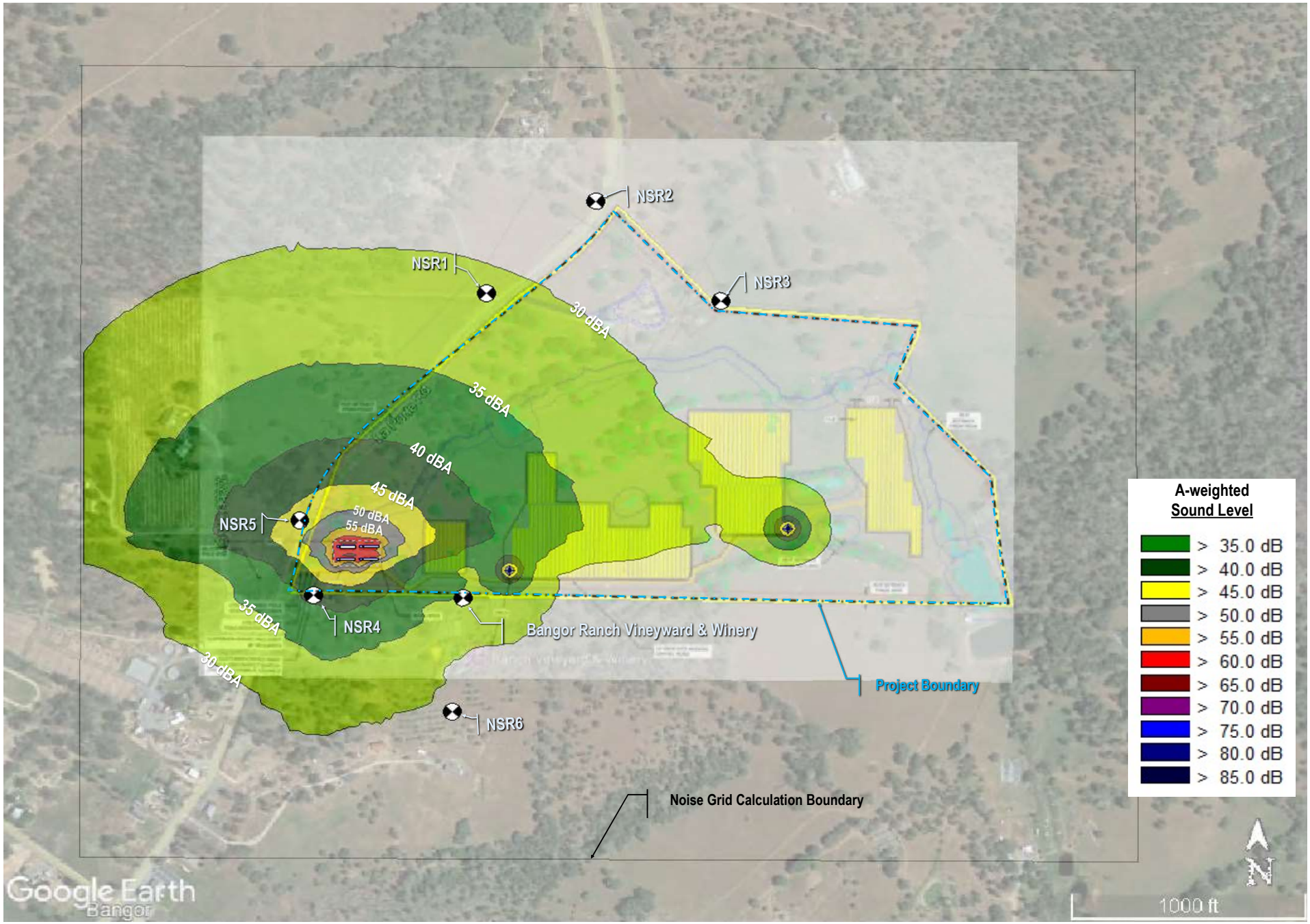
DUDEK

0 198 396 Feet

FIGURE 1

Project Location

La Porte Solar + Battery Project (Butte County, CA)



SOURCES: Google 2023; La Porte Solar + Battery 2023; Dudek 2024

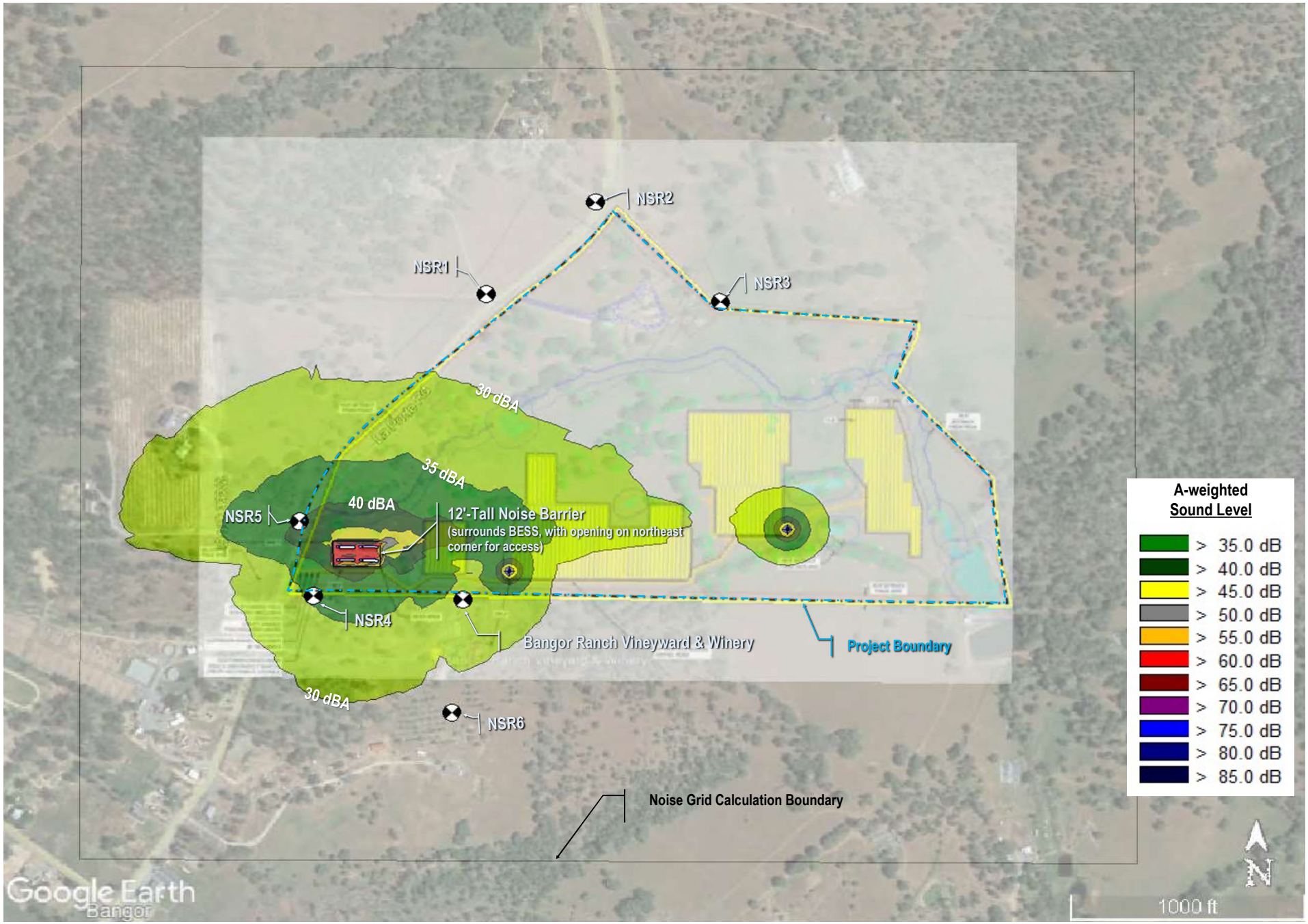
DUDEK

0 198 396 Feet

FIGURE 2

Predicted Stationary Source Operation Noise from Proposed Project (without 12'-tall noise barrier)

La Porte Solar + Battery Project (Butte County, CA)



SOURCES: Google 2023; La Porte Solar + Battery 2023; Dudek 2024

DUDEK

0 198 396 Feet

FIGURE 3

Predicted Stationary Source Operation Noise from Proposed Project (with 12'-tall noise barrier surrounding BESS equipment)

La Porte Solar + Battery Project (Butte County, CA)

Attachment A

Construction Noise Prediction Worksheets

To User: bordered cells are inputs, unbordered cells have formulae

noise level limit for construction phase at residential land use, per FTA guidance = 80

allowable hours over which Leq is to be averaged = 8

0 = temporary construction noise barrier (e.g., acoustic blankets or plywood sheeting) between source and receptor

Construction Activity	Equipment	Total Equipment Qty	AUF % (from FHWA RCNM)	Reference Lmax @ 50 ft. from FHWA RCNM	Client Equipment Description, Data Source and/or Notes	Source to NSR Distance (ft.)	*Temporary Barrier Insertion Loss (dB)*	*Additional Noise Reduction*	Distance-Adjusted Lmax	Allowable Operation Time (hours)	Allowable Operation Time (minutes)	Predicted 8-hour Leq	Source Elevation (ft)	Receiver Elevation (ft)	Barrier Height (ft)	Source to Barr. ("A") Horiz. (ft)	Rcvr. to Barr. ("B") Horiz. (ft)	Source to Rcvr. ("C") Horiz. (ft)	"A" (ft)	"B" (ft)	"C" (ft)	Path Length Diff. "P" (ft)	Abarr (dB)	Heff (with barrier)	Heff (wout barrier)	G (with barrier)	G (without barrier)	ILbarr (dB)
Site Preparation	grader	1	40	85		25	0.1		90.9	8	480	87	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	front end loader	1	40	79		25	0.1		84.9	8	480	81	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	backhoe	1	40	78		25	0.1		83.9	8	480	80	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	skid-steer*	1	40	80		25	0.1		85.9	8	480	82	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
									Total for Site Preparation Phase:			89.4																
Project BESS Site Preparation	dozer	1	40	82		25	0.1		87.9	8	480	84	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	backhoe	1	40	78		25	0.1		83.9	8	480	80	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
									Total for Project BESS Site Preparation Phase:			85.4																
Grading	grader	1	40	85		25	0.1		90.9	8	480	87	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	compactor (ground)	1	20	80		25	0.1		85.9	8	480	79	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	roller	1	20	80		25	0.1		85.9	8	480	79	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	front end loader	1	40	79		25	0.1		84.9	8	480	81	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	backhoe	1	40	78		25	0.1		83.9	8	480	80	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	skid-steer*	1	40	80		25	0.1		85.9	8	480	82	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
									Total for Grading Phase:			90.1																
Project BESS Site Grading	dozer	1	40	82		25	0.1		87.9	8	480	84	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	roller	1	20	80		25	0.1		85.9	8	480	79	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	backhoe	1	40	78		25	0.1		83.9	8	480	80	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
									Total for Project BESS Site Grading Phase:			86.3																
Battery Container Installation	crane	1	16	81		25	0.1		86.9	8	480	79	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	compressor (air)	1	40	78		25	0.1		83.9	8	480	80	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	excavator	1	40	81		25	0.1		86.9	8	480	83	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	generator	1	50	72		25	0.1		77.9	8	480	75	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	compactor (ground)	1	20	80		25	0.1		85.9	8	480	79	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	roller	1	20	80		25	0.1		85.9	8	480	79	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	gradall	1	40	83	"rough-terrain forklift"	25	0.1		88.9	8	480	85	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	backhoe	1	40	78		25	0.1		83.9	8	480	80	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	skid-steer*	1	40	80		25	0.1		85.9	8	480	82	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
									Total for Battery Container Installation Phase:			90.5																
Project PV Solar Array Installation	man lift	1	20	75	"aerial lift"	25	0.1		80.9	8	480	74	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	compressor (air)	1	40	78		25	0.1		83.9	8	480	80	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	auger drill rig	1	20	84		25	0.1		89.9	8	480	83	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	crane	1	16	81		25	0.1		86.9	8	480	79	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	excavator	1	40	81		25	0.1		86.9	8	480	83	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	generator	1	50	72		25	0.1		77.9	8	480	75	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	roller	1	20	80		25	0.1		85.9	8	480	79	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	gradall	1	40	83	"rough-terrain forklift"	25	0.1		88.9	8	480	85	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	slurry trenching machine	1	40	80		25	0.1		85.9	5	300	80	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	backhoe	1	40	80		25	0.1		85.9	6	360	81	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	dozer	1	40	80		25	0.1		85.9	7	420	81	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	skid-steer*	1	40	80		25	0.1		85.9	8	480	82	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
									Total for Project PV Solar Array Installation Phase:			91.8																
Decommissioning	concrete saw	1	20	90		25	0.1		95.9	8	480	89	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	crane	1	16	81		25	0.1		86.9	8	480	79	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	dozer	1	40	82		25	0.1		87.9	8	480	84	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	backhoe	1	40	78		25	0.1		83.9	8	480	80	5	5	0	5	20	25	7.1	20.6	25.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
									Total for Decommissioning Phase:			90.8																

Notes

* https://ia.cpuc.ca.gov/Environment/info/ene/mesa/attachment/A1503003%20ED-SCE-01%20Q.PD-01%20Attachment%20(Revised%20Noise%20Levels%20Construction%20Equipment).pdf

To User: bordered cells are inputs, unbordered cells have formulae

noise level limit for construction phase at residential land use, per FTA guidance = 80

allowable hours over which Leq is to be averaged = 8

0 = temporary construction noise barrier (e.g., acoustic blankets or plywood sheeting) between source and receptor

Construction Activity	Equipment	Total Equipment Qty	AUF % (from FHWA RCNM)	Reference Lmax @ 50 ft. from FHWA RCNM	Client Equipment Description, Data Source and/or Notes	Source to NSR Distance (ft.)	*Temporary Barrier Insertion Loss (dB)*	*Additional Noise Reduction*	Distance-Adjusted Lmax	Allowable Operation Time (hours)	Allowable Operation Time (minutes)	Predicted 8-hour Leq	Source Elevation (ft)	Receiver Elevation (ft)	Barrier Height (ft)	Source to Barr. ("A") Horiz. (ft)	Rcvr. to Barr. ("B") Horiz. (ft)	Source to Rcvr. ("C") Horiz. (ft)	"A" (ft)	"B" (ft)	"C" (ft)	Path Length Diff. "P" (ft)	Abarr (dB)	Heff (with barrier)	Heff (wout barrier)	G (with barrier)	G (without barrier)	ILbarr (dB)
Site Preparation	grader	2	40	85		800	0.1		55.5	8	480	55	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	front end loader	2	40	79		800	0.1		49.5	8	480	49	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	backhoe	2	40	78		800	0.1		48.5	8	480	48	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	skid-steer*	2	40	80		800	0.1		50.5	8	480	50	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
									Total for Site Preparation Phase:			**57.0**																
Project BESS Site Preparation	dozer	2	40	82		800	0.1		52.5	8	480	52	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	backhoe	2	40	78		800	0.1		48.5	8	480	48	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
									Total for Project BESS Site Preparation Phase:			**53.0**																
Grading	grader	2	40	85		800	0.1		55.5	8	480	55	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	compactor (ground)	2	20	80		800	0.1		50.5	8	480	47	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	roller	2	20	80		800	0.1		50.5	8	480	47	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	front end loader	2	40	79		800	0.1		49.5	8	480	49	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	backhoe	2	40	78		800	0.1		48.5	8	480	48	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	skid-steer*	2	40	80		800	0.1		50.5	8	480	50	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
									Total for Grading Phase:			**57.7**																
Project BESS Site Grading	dozer	2	40	82		800	0.1		52.5	8	480	52	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	roller	2	20	80		800	0.1		50.5	8	480	47	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	backhoe	2	40	78		800	0.1		48.5	8	480	48	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
									Total for Project BESS Site Grading Phase:			**53.9**																
Battery Container Installation	crane	2	16	81		800	0.1		51.5	8	480	47	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	compressor (air)	2	40	78		800	0.1		48.5	8	480	48	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	excavator	2	40	81		800	0.1		51.5	8	480	51	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	generator	4	50	72		800	0.1		42.5	8	480	45	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	compactor (ground)	2	20	80		800	0.1		50.5	8	480	47	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	roller	2	20	80		800	0.1		50.5	8	480	47	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	gradall	2	40	83	"rough-terrain forklift"	800	0.1		53.5	8	480	53	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	backhoe	2	40	78		800	0.1		48.5	8	480	48	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	skid-steer*	2	40	80		800	0.1		50.5	8	480	50	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
									Total for Battery Container Installation Phase:			**58.2**																
Project PV Solar Array Installation	man lift	6	20	75	"aerial lift"	800	0.1		45.5	8	480	46	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	compressor (air)	2	40	78		800	0.1		48.5	8	480	48	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	auger drill rig	2	20	84		800	0.1		54.5	8	480	51	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	crane	2	16	81		800	0.1		51.5	8	480	47	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	excavator	2	40	81		800	0.1		51.5	8	480	51	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	generator	2	50	72		800	0.1		42.5	8	480	42	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	roller	2	20	80		800	0.1		50.5	8	480	47	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	gradall	2	40	83	"rough-terrain forklift"	800	0.1		53.5	8	480	53	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	slurry trenching machine	4	40	80		800	0.1		50.5	5	300	50	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	backhoe	4	40	80		800	0.1		50.5	6	360	51	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	dozer	2	40	80		800	0.1		50.5	7	420	49	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	skid-steer*	2	40	80		800	0.1		50.5	8	480	50	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
									Total for Project PV Solar Array Installation Phase:			**60.1**																
Decommissioning	concrete saw	2	20	90		800	0.1		60.5	8	480	57	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	crane	2	16	81		800	0.1		51.5	8	480	47	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	dozer	2	40	82		800	0.1		52.5	8	480	52	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
	backhoe	2	40	78		800	0.1		48.5	8	480	48	5	5	0	600	200	800	600.0	200.1	800.0	0.00	0.1	5.0	5.0	0.7	0.7	0.1
									Total for Decommissioning Phase:			**58.4**																

Notes

* https://ia.cpuc.ca.gov/Environment/info/ene/mesa/attachment/A1503003%20ED-SCE-01%20Q.PD-01%20Attachment%20(Revised%20Noise%20Levels%20Construction%20Equipment).pdf

To User: bordered cells are inputs, unbordered cells have formulae

noise level limit for construction phase at residential land use, per FTA guidance = 80

allowable hours over which Leq is to be averaged = 8

8 = temporary construction noise barrier (e.g., acoustic blankets or plywood sheeting) between source and receptor

Construction Activity	Equipment	Total Equipment Qty	AUF % (from FHWA RCNM)	Reference Lmax @ 50 ft. from FHWA RCNM	Client Equipment Description, Data Source and/or Notes	Source to NSR Distance (ft.)	*Temporary Barrier Insertion Loss (dB)*	*Additional Noise Reduction*	Distance-Adjusted Lmax	Allowable Operation Time (hours)	Allowable Operation Time (minutes)	Predicted 8-hour Leq	Source Elevation (ft)	Receiver Elevation (ft)	Barrier Height (ft)	Source to Barr. ("A") Horiz. (ft)	Rcvr. to Barr. ("B") Horiz. (ft)	Source to Rcvr. ("C") Horiz. (ft)	"A" (ft)	"B" (ft)	"C" (ft)	Path Length Diff. "P" (ft)	Abarr (dB)	Heff (with barrier)	Heff (wout barrier)	G (with barrier)	G (without barrier)	ILbarr (dB)
Site Preparation	grader	1	40	85		25	13.7		77.3	8	480	73	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	front end loader	1	40	79		25	13.7		71.3	8	480	67	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	backhoe	1	40	78		25	13.7		70.3	8	480	66	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	60+H6:H61	1	40	80		25	13.7		72.3	8	480	68	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
								Total for Site Preparation Phase:				**75.8**																
Project BESS Site Preparation	dozer	1	40	82		25	13.7		74.3	8	480	70	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	backhoe	1	40	78		25	13.7		70.3	8	480	66	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
								Total for Project BESS Site Preparation Phase:				**71.8**																
Grading	grader	1	40	85		25	13.7		77.3	8	480	73	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	compactor (ground)	1	20	80		25	13.7		72.3	8	480	65	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	roller	1	20	80		25	13.7		72.3	8	480	65	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	front end loader	1	40	79		25	13.7		71.3	8	480	67	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	backhoe	1	40	78		25	13.7		70.3	8	480	66	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	skid-steer*	1	40	80		25	13.7		72.3	8	480	68	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
								Total for Grading Phase:				**76.5**																
Project BESS Site Grading	dozer	1	40	82		25	13.7		74.3	8	480	70	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	roller	1	20	80		25	13.7		72.3	8	480	65	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	backhoe	1	40	78		25	13.7		70.3	8	480	66	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
								Total for Project BESS Site Grading Phase:				**72.7**																
Battery Container Installation	crane	1	16	81		25	13.7		73.3	8	480	65	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	compressor (air)	1	40	78		25	13.7		70.3	8	480	66	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	excavator	1	40	81		25	13.7		73.3	8	480	69	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	generator	1	50	72		25	13.7		64.3	8	480	61	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	compactor (ground)	1	20	80		25	13.7		72.3	8	480	65	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	roller	1	20	80		25	13.7		72.3	8	480	65	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	gradall	1	40	83	"rough-terrain forklift"	25	13.7		75.3	8	480	71	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	backhoe	1	40	78		25	13.7		70.3	8	480	66	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	skid-steer*	1	40	80		25	13.7		72.3	8	480	68	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
								Total for Battery Container Installation Phase:				**76.9**																
Project PV Solar Array Installation	man lift	1	20	75	"aerial lift"	25	13.7		67.3	8	480	60	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	compressor (air)	1	40	78		25	13.7		70.3	8	480	66	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	auger drill rig	1	20	84		25	13.7		76.3	8	480	69	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	crane	1	16	81		25	13.7		73.3	8	480	65	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	excavator	1	40	81		25	13.7		73.3	8	480	69	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	generator	1	50	72		25	13.7		64.3	8	480	61	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	roller	1	20	80		25	13.7		72.3	8	480	65	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	gradall	1	40	83	"rough-terrain forklift"	25	13.7		75.3	8	480	71	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	slurry trenching machine	1	40	80		25	13.7		72.3	5	300	66	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	backhoe	1	40	80		25	13.7		72.3	6	360	67	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	dozer	1	40	80		25	13.7		72.3	7	420	68	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	skid-steer*	1	40	80		25	13.7		72.3	8	480	68	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
								Total for Project PV Solar Array Installation Phase:				**78.3**																
Decommissioning	concrete saw	1	20	90		25	13.7		82.3	8	480	75	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	crane	1	16	81		25	13.7		73.3	8	480	65	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	dozer	1	40	82		25	13.7		74.3	8	480	70	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
	backhoe	1	40	78		25	13.7		70.3	8	480	66	5	5	8	5	20	25	5.8	20.2	25.0	1.05	13.2	13.0	5.0	0.5	0.7	13.7
								Total for Decommissioning Phase:				**77.2**																

Notes

* https://ia.cpuc.ca.gov/Environment/info/ene/mesa/attachment/A1503003%20ED-SCE-01%20Q.PD-01%20Attachment%20(Revised%20Noise%20Levels%20Construction%20Equipment).pdf

To User: bordered cells are inputs, unbordered cells have formulae

noise level limit for construction phase at residential land use, per FTA guidance = 80

allowable hours over which Leq is to be averaged = 8

8 = temporary construction noise barrier (e.g., acoustic blankets or plywood sheeting) between source and receptor

Construction Activity	Equipment	Total Equipment Qty	AUF % (from FHWA RCNM)	Reference Lmax @ 50 ft. from FHWA RCNM	Client Equipment Description, Data Source and/or Notes	Source to NSR Distance (ft.)	*Temporary Barrier Insertion Loss (dB)*	*Additional Noise Reduction*	Distance-Adjusted Lmax	Allowable Operation Time (hours)	Allowable Operation Time (minutes)	Predicted 8-hour Leq	Source Elevation (ft)	Receiver Elevation (ft)	Barrier Height (ft)	Source to Barr. ("A") Horiz. (ft)	Rcvr. to Barr. ("B") Horiz. (ft)	Source to Rcvr. ("C") Horiz. (ft)	"A" (ft)	"B" (ft)	"C" (ft)	Path Length Diff. "P" (ft)	Abarr (dB)	Heff (with barrier)	Heff (wout barrier)	G (with barrier)	G (without barrier)	ILbarr (dB)
Site Preparation	grader	2	40	85		800	0.0		55.5	8	480	55	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	front end loader	2	40	79		800	0.0		49.5	8	480	49	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	backhoe	2	40	78		800	0.0		48.5	8	480	48	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	skid-steer*	2	40	80		800	0.0		50.5	8	480	50	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
									Total for Site Preparation Phase:			**57.0**																
Project BESS Site Preparation	dozer	2	40	82		800	0.0		52.5	8	480	52	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	backhoe	2	40	78		800	0.0		48.5	8	480	48	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
									Total for Project BESS Site Preparation Phase:			**53.0**																
Grading	grader	2	40	85		800	0.0		55.5	8	480	55	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	compactor (ground)	2	20	80		800	0.0		50.5	8	480	47	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	roller	2	20	80		800	0.0		50.5	8	480	47	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	front end loader	2	40	79		800	0.0		49.5	8	480	49	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	backhoe	2	40	78		800	0.0		48.5	8	480	48	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	skid-steer*	2	40	80		800	0.0		50.5	8	480	50	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
									Total for Grading Phase:			**57.8**																
Project BESS Site Grading	dozer	2	40	82		800	0.0		52.5	8	480	52	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	roller	2	20	80		800	0.0		50.5	8	480	47	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	backhoe	2	40	78		800	0.0		48.5	8	480	48	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
									Total for Project BESS Site Grading Phase:			**53.9**																
Battery Container Installation	crane	2	16	81		800	0.0		51.5	8	480	47	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	compressor (air)	2	40	78		800	0.0		48.5	8	480	48	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	excavator	2	40	81		800	0.0		51.5	8	480	51	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	generator	4	50	72		800	0.0		42.5	8	480	46	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	compactor (ground)	2	20	80		800	0.0		50.5	8	480	47	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	roller	2	20	80		800	0.0		50.5	8	480	47	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	gradall	2	40	83	"rough-terrain forklift"	800	0.0		53.5	8	480	53	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	backhoe	2	40	78		800	0.0		48.5	8	480	48	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	skid-steer*	2	40	80		800	0.0		50.5	8	480	50	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
									Total for Battery Container Installation Phase:			**58.3**																
Project PV Solar Array Installation	man lift	6	20	75	"aerial lift"	800	0.0		45.5	8	480	46	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	compressor (air)	2	40	78		800	0.0		48.5	8	480	48	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	auger drill rig	2	20	84		800	0.0		54.5	8	480	51	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	crane	2	16	81		800	0.0		51.5	8	480	47	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	excavator	2	40	81		800	0.0		51.5	8	480	51	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	generator	2	50	72		800	0.0		42.5	8	480	43	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	roller	2	20	80		800	0.0		50.5	8	480	47	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	gradall	2	40	83	"rough-terrain forklift"	800	0.0		53.5	8	480	53	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	slurry trenching machine	4	40	80		800	0.0		50.5	5	300	51	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	backhoe	4	40	80		800	0.0		50.5	6	360	51	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	dozer	2	40	80		800	0.0		50.5	7	420	49	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	skid-steer*	2	40	80		800	0.0		50.5	8	480	50	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
									Total for Project PV Solar Array Installation Phase:			**60.2**																
Decommissioning	concrete saw	2	20	90		800	0.0		60.5	8	480	57	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	crane	2	16	81		800	0.0		51.5	8	480	47	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	dozer	2	40	82		800	0.0		52.5	8	480	52	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
	backhoe	2	40	78		800	0.0		48.5	8	480	48	5	5	8	600	200	800	600.0	200.0	800.0	0.03	1.5	13.0	5.0	0.5	0.7	0.0
									Total for Decommissioning Phase:			**58.5**																

Notes

* https://ia.cpuc.ca.gov/Environment/info/ene/mesa/attachment/A1503003%20ED-SCE-01%20Q.PD-01%20Attachment%20(Revised%20Noise%20Levels%20Construction%20Equipment).pdf

Attachment B

Operation Noise Prediction Model Inputs

Receivers

1/9/24 - no wall

Name	M.	ID	Level Lr		Limit. Value		Land Use		Height		Coordinates									
			Day	Night	Day	Night	Type	Auto	Noise Type		X	Y	Z				no wall, no dB attenuation		12' wall, no dB attenuation	
			(dBA)	(dBA)	(dBA)	(dBA)				(ft)	(ft)	(ft)	(ft)		Receiver	ID	dB(A)	CNEL	dB(A)	CNEL
MPL1		NSR1	31	31	0	0	x		Total	5 r	2142.62	2939.6	5		130ft NW of Project Boundary	NSR1	31	37.7	26.6	33.3
MPL2		NSR2	27	27	0	0	x		Total	5 r	2619.44	3373.69	5		100ft NW of Project Boundary	NSR2	27	33.7	23.2	29.9
MPL3		NSR3	27.1	27.1	0	0	x		Total	5 r	3165.16	2905.15	5		40ft N of Project Boundary	NSR3	27.1	33.8	23.9	30.6
MPL4		NSR4	41.4	41.4	0	0	x		Total	5 r	1388.96	1531.35	5		20ft S of Project Boundary	NSR4	41.4	48.1	35.8	42.5
MPL5		NSR5	47	47	0	0	x		Total	5 r	1323.92	1883.5	5		50ft W of Project Boundary	NSR5	47	53.7	39.9	46.6
MPL6		NSR6	28.3	28.3	0	0	x		Total	5 r	1993.32	988.78	5		530ft S of Project Boundary	NSR6	28.3	35	27.5	34.2
Bangor Ranch Vineyard & Winery		BRVW	34.5	34.5	0	0	x		Total	5 r	2039.41	1517.56	5		20ft S of Project Boundary	BRVW	34.5	41.2	34.1	40.8

1/9/24 - w/ 12' wall, no equipment NR

Name	M.	ID	Level Lr		Limit. Value		Land Use		Height		Coordinates		
			Day	Night	Day	Night	Type	Auto	Noise Type		X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)				(ft)	(ft)	(ft)	(ft)
MPL1		NSR1	26.6	26.6	0	0	x		Total	5 r	2142.62	2939.6	5
MPL2		NSR2	23.2	23.2	0	0	x		Total	5 r	2619.44	3373.69	5
MPL3		NSR3	23.9	23.9	0	0	x		Total	5 r	3165.16	2905.15	5
MPL4		NSR4	35.8	35.8	0	0	x		Total	5 r	1388.96	1531.35	5
MPL5		NSR5	39.9	39.9	0	0	x		Total	5 r	1323.92	1883.5	5
MPL6		NSR6	27.5	27.5	0	0	x		Total	5 r	1993.32	988.78	5
Bangor Ranch Vineyard & Winery		BRVW	34.1	34.1	0	0	x		Total	5 r	2039.41	1517.56	5

Vertical Area Sources

Name	M.	ID	Result. PWL			Result. PWL''			Lw / Li			Correction			Sound Reduction		Attenuatic	Operating Time			K0	Freq.	Direct.			
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night						
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(ft²)		(min)	(min)	(min)	(dB)	(Hz)			Evening	Night
Centipede Inverter - long side		CINVLS	79.8	79.8	79.8	74.8	74.8	74.8	Lw	CAB1000		0	0	0			4.5				3		(none)			
BESS Segment Cooling Fan (one side)		Vent	87.6	87.6	87.6	74.6	74.6	74.6	Lw	Vent		0	0	0			4.6				3		(none)			
BESS Segment Cooling Fan (one side)		Vent	87.6	87.6	87.6	74.6	74.6	74.6	Lw	Vent		0	0	0			4.6				3		(none)			
BESS Segment Cooling Fan (one side)		Vent	87.6	87.6	87.6	74.6	74.6	74.6	Lw	Vent		0	0	0			4.6				3		(none)			
BESS Segment Cooling Fan (one side)		Vent	87.6	87.6	87.6	74.6	74.6	74.6	Lw	Vent		0	0	0			4.6				3		(none)			
Centipede Inverter - long side		CINVLS	79.8	79.8	79.8	74.8	74.8	74.8	Lw	CAB1000		0	0	0			4.5				3		(none)			
Centipede Inverter - right side		CINVRS	75.3	75.3	75.3	72.3	72.3	72.3	Lw	CAB1000		0	0	0			9				3		(none)			
Centipede Inverter - long side		CINVLS	79.8	79.8	79.8	74.8	74.8	74.8	Lw	CAB1000		0	0	0			4.5				3		(none)			
Centipede Inverter - long side		CINVLS	79.8	79.8	79.8	74.8	74.8	74.8	Lw	CAB1000		0	0	0			4.5				3		(none)			
Centipede Inverter - long side		CINVLS	79.8	79.8	79.8	74.8	74.8	74.8	Lw	CAB1000		0	0	0			4.5				3		(none)			
Centipede Inverter - long side		CINVLS	79.8	79.8	79.8	74.8	74.8	74.8	Lw	CAB1000		0	0	0			4.5				3		(none)			
Centipede Inverter - long side		CINVLS	79.8	79.8	79.8	74.8	74.8	74.8	Lw	CAB1000		0	0	0			4.5				3		(none)			
Centipede Inverter - long side		CINVLS	79.8	79.8	79.8	74.8	74.8	74.8	Lw	CAB1000		0	0	0			4.5				3		(none)			
Centipede Inverter - right side		CINVRS	75.3	75.3	75.3	72.5	72.5	72.5	Lw	CAB1000		0	0	0			9				3		(none)			
Centipede Inverter - right side		CINVRS	75.3	75.3	75.3	72.5	72.5	72.5	Lw	CAB1000		0	0	0			9				3		(none)			
Centipede Inverter - right side		CINVRS	75.3	75.3	75.3	72.5	72.5	72.5	Lw	CAB1000		0	0	0			9				3		(none)			

Point Sources

Name	M.	ID	Result. PWL			Lw / Li			Correction			Sound Reduction		Attenuatic	Operating Time			K0	Freq.	Direct.	Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night						X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(ft²)		(min)	(min)	(min)	(dB)	(Hz)		(ft)		(ft)	(ft)	(ft)
solar cluster inverter			76.6	76.6	76.6	Lw	SCI		0	0	0							0		(none)	5	r	2243.18	1649.12	5
solar cluster inverter			76.6	76.6	76.6	Lw	SCI		0	0	0							0		(none)	5	r	3456.01	1843.97	5

Barriers

Name	M.	ID	Absorption left	Absorption right	Z-Ext. (ft)	Cantilever horz. (ft)	Cantilever vert. (ft)	Height Begin (ft)		Height End (ft)
12' Barrier	-	Barrier	0.2	0.2				12	r	

Buildings

Name	M.	ID	RB	Residents	Absorption	Height Begin (ft)	
POWIN Stack750		CENT		0	0.1	10.8	r
BESS Inverter		BINV		0	0.1	6	r
POWIN Stack750		CENT		0	0.1	10.8	r
POWIN Stack750		CENT		0	0.1	10.8	r
POWIN Stack750		CENT		0	0.1	10.8	r
BESS Inverter		BINV		0	0.1	6	r
BESS Inverter		BINV		0	0.1	6	r
BESS Inverter		BINV		0	0.1	6	r
Solar Inverter		SINV		0	0.1	6	r
Solar Inverter		SINV		0	0.1	6	r

Sound Levels (local)

Name	ID	Type	Oktave Spectrum (dB)											Source
			Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A lin	
BESS Segment Cooling Fans (one side)	Vent	Lw		98	98	91	91	88	88	83	81	80	92.2 102.3	POWIN Stack750 "centipedes" 20-segment data
Solar collection inverter	SCI	Lw	A	34.2	53.2	65.2	67.2	73.2	70.2	66.2	61.2	52.2	76.6 85.3	Maddox overall data w/ EEI EPPENG spectra
CAB1000 inverter	CAB1000	Lw	A	34.3	48.9	57.9	67.6	72.1	76.9	73.8	68.2	58.2	84.3 89.6	supplier test data on triple, adjust by -1.8 dB
for Table 4 in memo: (includes attenuation by Source)				39	26	16	9	3	0	-1	-1	1		
BESS Segment Cooling Fans (one side)				54.4	67.4	70.4	77.4	80.4	83.4	79.4	77.4	74.4	87.6	
Solar collection inverter				34.2	53.2	65.2	67.2	73.2	70.2	66.2	61.2	52.2	76.6	
CAB1000 inverter - long side				29.8	44.4	53.4	63.1	67.6	72.4	69.3	63.7	53.7	75.6	
CAB1000 inverter - right side				25.3	39.9	48.9	58.6	63.1	67.9	64.8	59.2	49.2	71.1	

APPENDIX - D

NOXIOUS WEED AND AGRICULTURAL PEST MANAGEMENT PLAN

June 2023

La Porte Road Solar + BESS

(Name)

NOXIOUS WEED and AGRICULTURAL PEST MAINTENANCE/MANAGEMENT PLAN

5864 La Porte Road, Butte County, CA

(Address)

General Information and Data Page

Authorized representative: Stephanie Loucas, CDO c/o Brian Madigan .

Title: **Chief Development Officer/** Senior Permitting Manager **. Owner / Operator**

APN: 028-240-061 .

I am submitting an agricultural weed maintenance plan. I understand that this plan is conditional and pursuant to the Agricultural Element, County General Plan and will require approval by the Agricultural Commissioner's Office. I agree to adhere to the following conditions and maintain the required documents. I understand that this plan may require changes in the future to address unforeseen pest control circumstances.

Check list of documents:

- ☑ An Agricultural Maintenance Plan, signed by the authorized representative.
- ☑ A map of the site identifying the crop and pesticide application areas.
- ☐ Pesticides permit and current use reports:
  OP ID/RMP Number :_____
- ☐ Any other pertinent agricultural permits or certification.
  (Organic, CPC, Nursery, Weed Free Certification):_____
- ☐ Registration with the Butte-Yuba-Sutter Watershed Coalition if required.
- ☐ Agricultural Burn Permit (if agricultural burning is to take place) from the Air Quality Management District._____

Responsible Pest Control Business or pest control employee:
RPCA Solar 11 will identify and select a responsible pest control business prior to issuance of building permit

Phone numbers:_____tbd_____

Signature: Type text here _____ **Date**__6/21/23_____

Phone Numbers: 207-370-1343

General Conditions for Certification:

- A detailed map of the project area is required.
- A designated individual or Pest Control Business (or both) must be assigned as responsible for the required weed control activities:
- The applicant must promptly and aggressively pursue noxious weed control in the project area, including access roads, and meet all conditions to prevent the transport of noxious weeds, from or to public or private lands on transport vehicles.
- Noxious weed control must be continual and ongoing until control is gained, to the satisfaction of the Agricultural Commissioner's Office.
- The weed management plan will be updated in consultation with a County Weed Biologist as necessary to prevent infestation and spread from weed infested areas.
- Vehicles or machinery will not park in or unnecessarily drive through weed infested areas.
- Erosion control products (hay or straw) or groundcover or any other imported natural material used must be noxious weed free from a **certified** source.
- Promptly take action to remove identified noxious weeds.
- Identified noxious weeds must not be allowed to reach the flowering or seed dispersal stage.
- Prevent small noxious weed patch reproduction (vegetative spread and seed dispersal) while steadily replacing removed weeds with desired plants (naturally or through re-vegetation)
- Prevent weed invasion, establishment, and growth in "protected" areas (high quality areas with highly desirable plant cover, relatively weed-free)
- Prevent or greatly reduce weed seed production and dispersal along roadways and waterways, and from crossing onto neighboring property.

Specific Conditions for Certification:

☒ Access roads: Access roads will be maintained free of noxious weeds using herbices.

☐ composting stock piles, green waist, and storage areas:
Will not be used.

☐ Treatment of contaminated stock
No nursery stock will be used.

☒ Equipment and vehicle parking and storage areas

Temporary access and staging will be kept weed free with herbicide useage. Permanent components will be rock/gravel and will be treated as needed with herbicides.

☒ Timing of chemical sprays and control activities:

As needed during construction and annual spring maintenance. See attached for details.

☒ Disposition of slash or cutting debris containing noxious weed seeds:

Not expected.

☒ Priority weed and pest species list:

See attached.

Review:

Agricultural Department Representative: _____Date:_____

LA PORTE ROAD SOLAR PROJECT
NOXIOUS WEED AND AGRICULTURAL PEST MANAGEMENT PLAN
BUTTE COUNTY, CALIFORNIA

JUNE 2023

ONLY THE CLIENT OR ITS DESIGNATED REPRESENTATIVES MAY USE THIS DOCUMENT AND ONLY FOR THE SPECIFIC PROJECT FOR WHICH THIS REPORT WAS PREPARED.

Prepared for:

Brian Madigan
Senior Permitting Manager
RPCA Solar 11, LLC
Wildcat Renewables, LLC
Renewable Properties, LLC
879 Sanchez Street
San Francisco, CA 94114

La Porte Road Solar Project
Noxious Weed and Agricultural Pest Management Plan
Butte County, California

Prepared by:

Susan Dewar
Senior Ecologist, Project Manager

Reviewed by:

Eliza Shepard
Senior Botanist

KLEINFELDER
2882 Prospect Park Drive, Suite 200
Rancho Cordova, CA 95670

June 2023
Kleinfelder Project No. 20232542.001A

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FIGURES

SUMMARY

The proposed La Porte Road Solar Project (Project) is a small-scale utility solar generating and energy storage project located in the unincorporated community of Bangor, in Butte County, California (Figure 1). In September of 2022 and May of 2023, Kleinfelder biologists conducted a desktop review of the vicinity of the Project Area and performed a field verification survey. In addition, a Kleinfelder botanist performed a botanical survey on May 23, 2023. The field surveys focused on the approximate 23.5-acre Project Area (the area inside of the proposed fenceline and the proposed access road); however, a larger footprint was surveyed to incorporate habitats that may support source populations of target noxious weed species (Project Area and all other areas within the subject parcel south of Wilson Creek and west of a wetland seep on the east side of the parcel; "Study Area").

This Noxious Weed and Agricultural Pest Management Plan (Plan) outlines methods to ensure that the conversion of the Project Area from agriculture (i.e., grazing) to non-agricultural use does not become a nuisance to adjacent agricultural operations and presents methods to manage agricultural pests during development and operation of the Project.

1 INTRODUCTION

1.1 BACKGROUND AND PROJECT DESCRIPTION

The La Porte Road Solar Project is a small-scale utility solar generation project located on approximately 23.5 acres of an 82-acre parcel located just northeast of the community of Bangor in unincorporated Butte County. The Project is located at 5864 La Porte Road (APN # 028-240-061). Wildcat Renewables, LLC has entered into a long-term lease agreement with the property owner (Ross W. McGowan Trust) to facilitate the development of a small-scale, solar energy generating facility.

The Project will generate up to 3.0 megawatts (MW) alternating current (AC) (4.2 MW direct current [DC]) of clean, reliable solar energy when complete. The Project will interconnect to Pacific Gas and Electric's (PG&E's) pre-existing electrical distribution system located on site. The power generated from this facility will be sold to PG&E through a long-term Power Purchase Agreement (PPA). Additionally, the Project will be equipped with battery energy storage technology that will allow on site renewable energy generation to be stored and dispatched onto the grid when needed.

The Project will utilize approximately 7,776 solar modules and 24 string inverters to convert the sun's energy into usable, AC power. Single-axis tracking technology will be utilized to allow the modules to efficiently track the sun throughout the day and maximize the efficiency of solar collection. The modules will be mounted on a steel racking system, which will be anchored into the ground using driven steel piers. The overall height of the array will be no more than 15-feet tall (i.e., panel height at maximum tilt).

1.2 OBJECTIVES

The purpose of this Plan is to identify plant pests that may occur in the Project Area or Study Area and to describe methods to manage these pests in the context of protecting Butte County's agricultural resources.

1.3 PROJECT LOCATION

The approximate 82-acre parcel is located on the east side of La Porte Road, approximately 0.35-mile northeast of the intersection of Los Verjeles Road and La Porte Road (Figure 2). The Study Area is surrounded primarily by rural residential properties where grazing and small-scale agricultural practices are common.

The study area is situated at an elevation of approximately 800-900 feet above mean sea level in the foothills of the Sierra Nevada. No structures are located in the study area; however, a residence is located in the northern portion of the parcel (Figure 2).

The study area is situated within Township 18 North, Range 5 East, and Section 27 of the Bangor 7.5-minute U.S. Geological Survey (USGS) quadrangle. The corresponding latitude and longitude at the approximate center of the Project area is 39°23'36.33" north latitude and 121°23'57.49" west longitude.

2 REGULATORY SETTING

2.1 BUTTE COUNTY GENERAL PLAN AND PEST MANAGEMENT

Butte County is a major producer of a wide variety of farm products. The Butte County General Plan 2030 (Butte County 2010) recognizes the central role agriculture plays in the physical, economic and cultural character of Butte County. The Agriculture Element contains goals, policies and actions designed to protect, maintain, promote and enhance agriculture. The County Agricultural Commissioner is charged with the responsibility of managing nuisance pests to agriculture and protecting human health. Pursuant to the Agricultural Element, the Butte County Weed Management Program requires preparation and submittal of this Plan to the Agricultural Commissioner's Office.

3 BIOLOGICAL SETTING

The biological setting surrounding the study area is primarily rural residential development and agriculture within gently rolling hills and oak woodland habitat.

3.1 EXISTING CONDITIONS

The study area is composed primarily of non-native annual grasses and forbs with scattered patches of blue oak (*Quercus douglasii*) woodland. There was evidence of grazing (cow patties) during the September 9, 2022 survey, and the vegetation was 2-8 inches in height. Cows were actively grazing the site during the May 11, 2023 survey; however, the grass was 8-12 inches in height at that time. A discussion of the general characteristics observed within the study area during the field survey are presented below.

3.1.1 SOILS

According to the NRCS (USDA 2022), one soil type, Flanly-Swedesflat, 2 to 15 percent slopes, is present within the study area. Flanly-Swedesflat consists of shallow, well drained soils that formed in residuum from intrusive igneous rocks, mainly quartz diorite. Swedesflat soils are on ridge tops and side slopes on plutons in Sierra Nevada foothills.

3.1.2 VEGETATION COMMUNITIES

Using the classifications described in *A Manual of California Vegetation* (Sawyer Keeler-Wolf 2009), two vegetation communities, including non-native annual grassland and blue oak (*Quercus douglasii*) woodland, are present within the study area. These are described in more detail below.

Non-Native Annual Grassland. The primary vegetation community mapped within the study area was non-native annual grassland. Dominant plant species identified in this vegetation community during the field survey included saltgrass (*Distichlis spicata*), hedgehog dogtail (*Cynosurus echinatus*), medusahead (*Elymus caput-medusae*), yellow star thistle (*Centaurea solstitialis*), stork's bill (*Erodium* sp.), wild oat (*Avena* sp.), trefoil (*Trifolium* sp.), Italian thistle (*Carduus pycnocephalus*), tarweed (*Madia* sp.), little quaking-grass (*Briza minor*), and soft brome (*Bromus hordeaceous*).

Blue Oak Woodland. This vegetation community was mapped in patches throughout the study area and primarily included blue oak; however, California foothill pine (*Pinus sabiniana*), interior live oak (*Quercus wislizeni*), valley oak (*Quercus lobata*), and California buckeye (*Aesculus californica*) were also observed within this vegetation community.

3.2 Potential Agricultural Pests

3.2.1 Target Noxious Weeds

Reconnaissance surveys identified five noxious weed species included on the California Department of Food and Agriculture (CDFA) *Weed Pest Ratings and CCR 4500 Noxious Weeds as of June 22, 2021* list: medusahead (distributed throughout the study area), yellow star thistle (*Centaurea solstitialis*; one point and two polygons with an estimated population of 195 plants), Italian thistle (*Carduus pycnocephalus* ssp. *pycnocephalus*; one point location with an estimated total population of six plants), goat grass (*Aegilops triuncialis*; one point with estimated population of 200 plants), and Klamath weed (*Hypericum perforatum*; one point with a population of four plants) (Figure 2).

4 Control Methods

Because target weed species are known to occur in the Project Area, the primary objective of this plan is to prescribe preventative measures during construction and operations that will mitigate the potential for increase of these populations onsite and avoid spreading weeds offsite.

4.1 Preventative Measures

The following measures will be implemented as applicable and feasible, to prevent the spread of target weed species:

- Ground-disturbing construction equipment, such as geotechnical boring or trenching equipment, will be cleaned prior to arrival at the work site and when leaving the Project Area. The construction contractor or designated representative will ensure that equipment is free of soil and debris capable of transporting weed seeds, roots, or rhizomes before the equipment is allowed onsite and shall refuse entry of equipment that is not in compliance.
- Other construction vehicles (e.g., pick-up trucks) that will be frequently entering and exiting the site will be inspected and washed on an as-needed basis. Personal vehicles will be inspected and washed on an as-needed basis. Delivery vehicles will be exempt from this requirement. Parking and staging should be located outside of known weed infestations to the greatest extent possible.
- Tools associated with ground-disturbing activities and/or vegetation trimming/removal activities will be cleaned prior to use in areas containing natural vegetation. Chainsaws and other tools and equipment will be cleaned with compressed air, water, cloth, and/or wire brush as appropriate.
- After conducting work with tools involving ground-disturbing activities and/or vegetation trimming/removal activities in areas infested with weeds, tools must be cleaned before they are removed from the infested area.
- "Flag and Avoid." Prior to construction, target weed infestations will be identified and flagged in the field and reported to construction supervisor(s). The flagging will alert construction personnel and is intended to prevent access into areas slated for disturbance until weed control measures have been implemented.
- Straw or hay bales, straw wattles, mats, and other plant materials used for erosion control or other purposes must be obtained from certified sources that are free of weed seeds. Additional products such as gravel, mulch, and soil, may also carry weed seeds. Such products will be obtained from suppliers who can provide weed-free certified materials.

- To prevent contamination of construction supplies such as "weed-free" sediment barriers, weeds will be treated in construction staging areas as needed, preventing weeds from setting seed within the material stockpiles.
- Stockpiles of gravel and soil will be kept in a weed-free state. During storage, they will be inspected for weeds on a regular basis (minimum of twice a year during the growing season). If stockpiles are found to be infested, treatment may be required, including herbicide treatment. Once treated, this material will be considered a source of weed seeds. The stockpile can be monitored in place until weeds are considered eradicated.
- Disturbance to vegetation will be limited to the minimum necessary to perform the activity safely and as designed.

4.2 VEGETATION MANAGEMENT

This section describes the manual and chemical weed control methods that will be used, as deemed necessary, within the Project Area. All weed control methods will minimize disturbance to native vegetation, limit ingress and egress to defined routes, and avoid damage from herbicide use or other control methods to any environmentally sensitive areas (ESAs; oaks, wetlands, etc.) identified within or adjacent to the Project Area. The most recent version of Project maps depicting ESAs and biological constraints will be reviewed by the construction contractor prior to implementing any physical or chemical weed control measures, to ensure that sensitive resources are avoided as necessary.

Weed infestation within areas proposed for vehicular access or other ground disturbance should have live weeds treated via mechanical or chemical means prior to disturbance. Disturbed soil areas should be monitored for regrowth or new infestations and treated to avoid expansion of onsite populations and to avoid transport of weed seed offsite.

4.2.1 MECHANICAL CONTROL

Mechanical control of noxious weeds can be accomplished through properly timed spot mowing, string trimming, or hand pulling of known populations. Timing is important for this treatment to be most effective, and a bi-yearly schedule is beneficial to capture species at different growth stages or that mature at different times during the year.

4.2.2 CHEMICAL CONTROL

Various commercially available chemicals are useful for controlling noxious weeds. Below are four common herbicides. Any use of herbicides should follow the most current state, local, and manufacturer's guidelines and regulations. In all cases where chemical control is used, spot treatment of target weeds is recommended versus broadcast treatment of large areas which could cause damage to other non-target species.

Aminopyralid is the active ingredient in Milestone®, which is a broadleaf selective herbicide with both pre- and post-emergent activity that is used extensively in open space and wildlife areas for the control of noxious weeds. Aminopyralid, which is similar to triclopyr (below), is a selective auxin. Milestone is particularly effective on biennial and perennial thistles, knapweeds, and yellow star-thistle (Corteva Agriscience 2019a).

Clopyralid is the active ingredient in Transline®. Various formulations of clopyralid are labeled for use in crops, forestry, range, and utility rights-of-way. Clopyralid is very effective on difficult-to-control broadleaf target noxious weeds, specifically thistle species. The product has minimal potential for off-target impacts and is ideal for use where desirable broadleaf plants are present in combination with target noxious weeds. Herbicide effect is apparent within 24 to 48 hours (Corteva Agriscience 2019b).

Glyphosate is the active ingredient in Roundup Custom®, which is a broad-spectrum, non-selective, systemic post-emergent herbicide used for control of annual and perennial plants including grasses, sedges, broad-leaved weeds, and woody plants. Glyphosate formulated as Roundup Custom® can be applied to water for aquatic vegetation management. Glyphosate has favorable environmental attributes because it degrades in soil, sediment, and natural waters over time. It also binds tightly to soils and sediment, reducing its bioavailability soon after application (Monsanto 2010).

Triclopyr is the active ingredient in Garlon 3A®. Triclopyr is a broadleaf selective post-emergent terrestrial herbicide used for control of most annual and perennial broadleaf weeds and brush in both crop and non-crop sites. Triclopyr has little or no impact on grasses (Corteva Agriscience 2019c). Garlon 3A® is not registered for aquatic use.

Table 1. Control Methods for Target Weeds Identified in the Study Area

Scientific Name	Common Name	Control/Avoidance Strategy	Control Methods
Aegilops triuncialis	Goat grass	Containment. Treat known occurrences so that sizes do not increase or spread offsite. Monitor and eradicate new populations if found in disturbed areas.	Pulling, Foliar Treatment: The highest level of control will be achieved if plants are treated in spring (approximately May), after tillers have been produced, but before flowering.
Carduus pycnocephalus	Italian thistle	Containment. Treat known occurrences so that sizes do not increase or spread offsite. Monitor and eradicate new populations if found in disturbed areas.	Pulling, Foliar Treatment: For select occurrences, pull out entire plant and dig out roots. Bag for proper disposal. For stands, spray with post-emergent herbicide in the spring during the early bloom phase.
Centaurea solstitialis	yellow star thistle	Containment. Treat known occurrences so that sizes do not increase or spread offsite. Monitor and eradicate new populations if found in disturbed areas.	Pulling, Foliar Treatment: Pulling is the preferred method of control for this species. Pull out entire plant and root after bolting and prior to early flowering, and bag for proper disposal. For foliar treatment, use a post-emergent herbicide during the seedling stage and prior to bolting.
Elymus caput-medusae	medusahead	Prevention. Apply best practices to eliminate the transport of weed propagules and minimize conditions conducive to the establishment of new infestations onsite. Figure 2 represents presence of species onsite as a point, however this species is widespread/ubiquitous throughout the site.	Pulling, Chemical Treatment: Pulling small new infestations may be possible. Foliar treatment with a general herbicide such as glyphosate in the spring, or pre-emergent treatment with aminopyralid in the fall.

Table 1. Control Methods for Target Weeds Identified in the Study Area

Scientific Name	Common Name	Control/Avoidance Strategy	Control Methods
Hypericum perforatum	Klamath weed	Containment. Treat known occurrences so that sizes do not increase or spread. Monitor for occurrence and eradicate new populations if found in disturbed areas.	Pulling, Foliar Treatment: For select occurrences, pull out entire plant and dig out roots. Bag for proper disposal. For stands, spray with post-emergent herbicide in the spring during the seedling phase.

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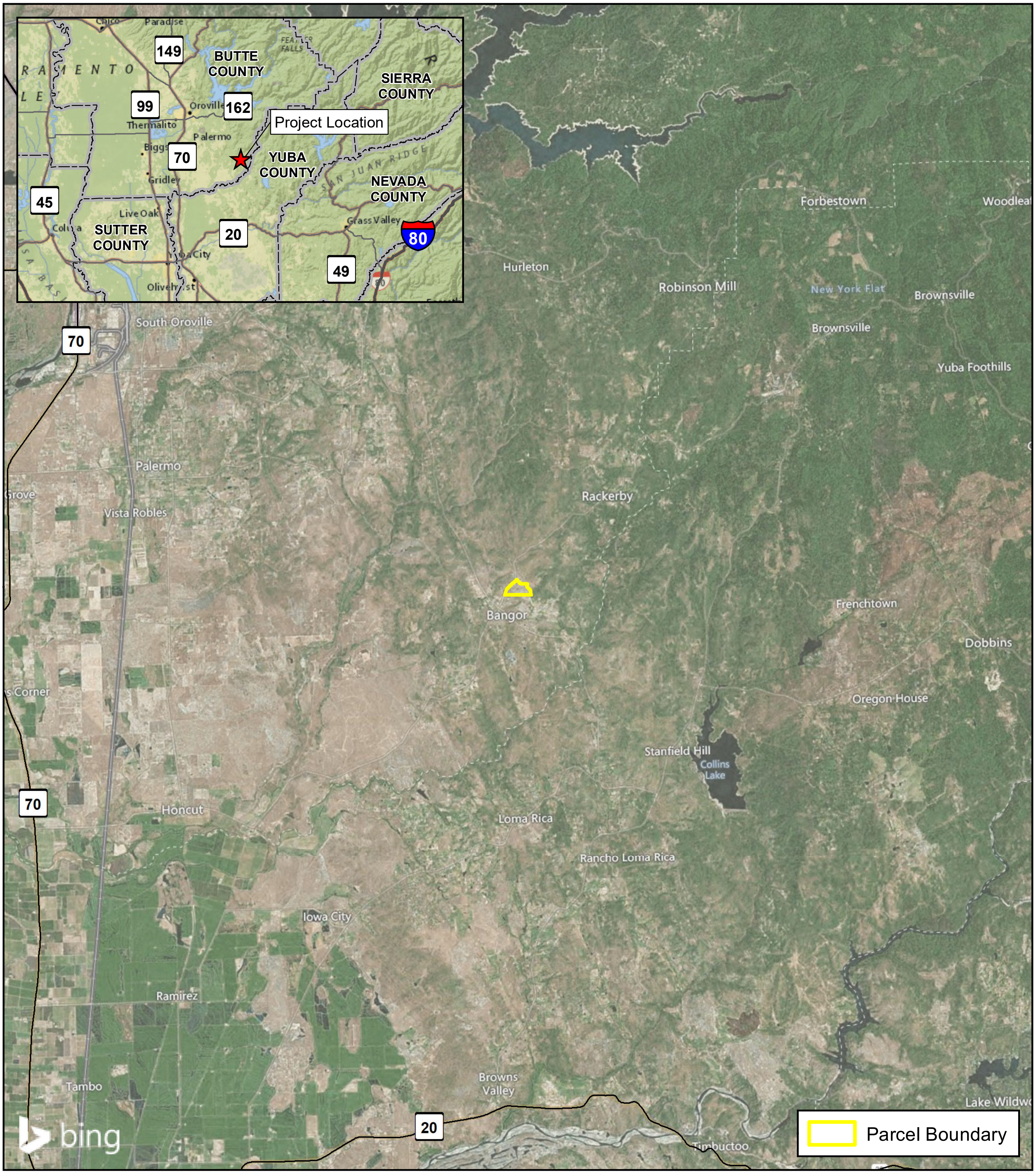

Source: Bing Maps

0 1.5 3 Miles

0 2.5 5 Kilometers

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Scale 1:190,080
1 in = 3 miles

Figure 1. Regional Vicinity
La Porte Road Solar Project
Butte County, California

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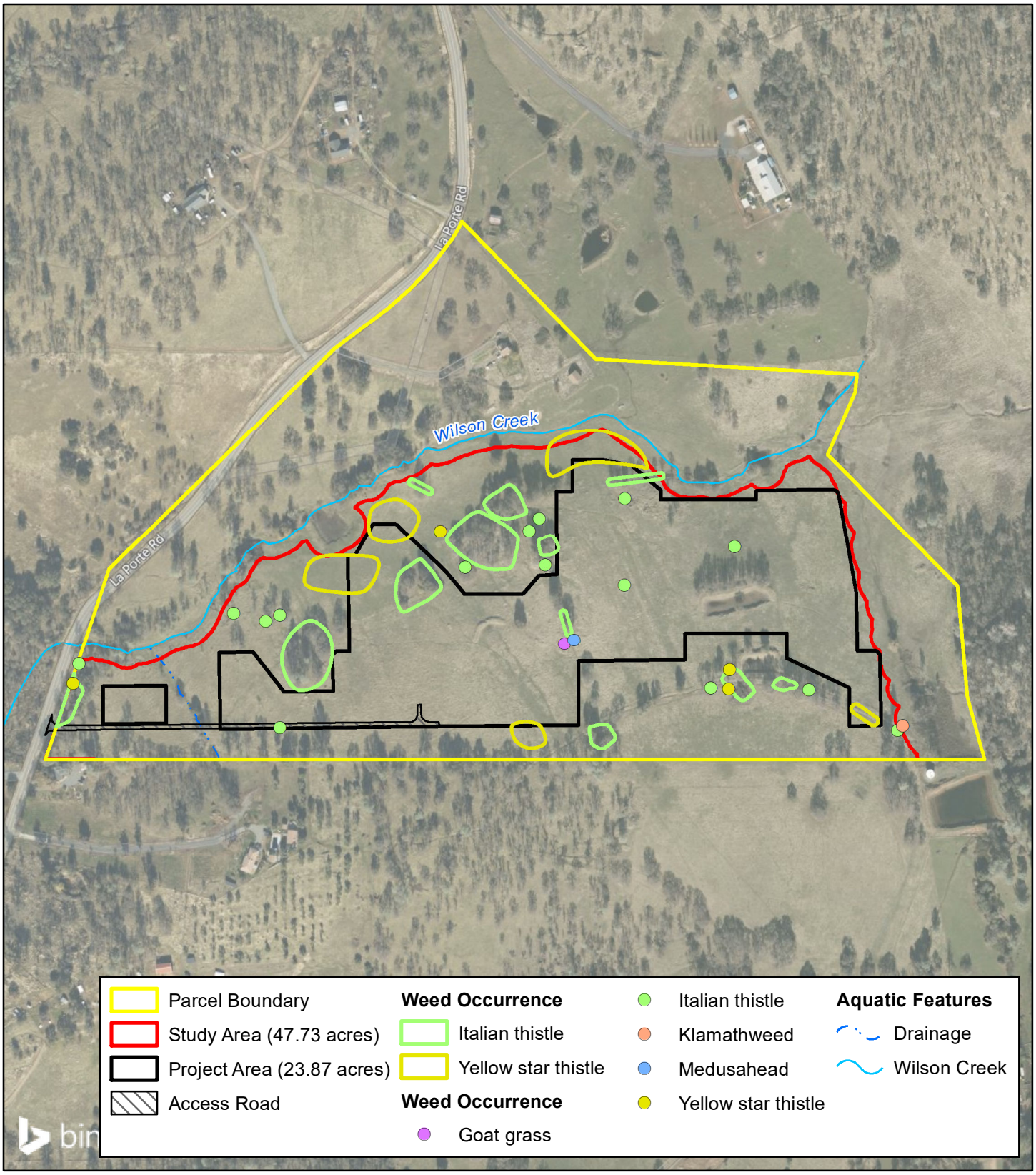

Source: Bing Maps

0 225 450 Feet

0 75 150 Meters

N

Scale 1:5,400
1 Inch = 450 Feet

Figure 2. Noxious Weed Reconnaissance Survey
RPCA La Porte Road Solar Project
Butte County, California

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APPENDIX - E

Oak Woodland Evaluation Plan
June 2023

LA PORTE ROAD SOLAR PROJECT
OAK WOODLAND EVALUATION PLAN

BUTTE COUNTY, CALIFORNIA

JUNE 2023

ONLY THE CLIENT OR ITS DESIGNATED REPRESENTATIVES MAY USE THIS DOCUMENT AND ONLY FOR THE SPECIFIC PROJECT FOR WHICH THIS REPORT WAS PREPARED.

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Oak Woodland Evaluation Plan
Butte County, California

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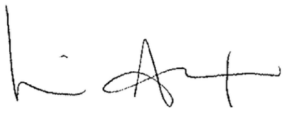

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June 2023
Kleinfelder Project No. 20232542.001A

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LA PORTE ROAD SOLAR PROJECT
OAK WOODLAND EVALUATION PLAN

SUMMARY

The proposed RPCA La Porte Road Solar Project (Project) is a small-scale utility solar generating and energy storage project located near the unincorporated community of Bangor, in Butte County, California (Figure 1). In September of 2022 and May of 2023, Kleinfelder Certified Arborist Susan Dewar performed an oak tree survey and mapped the tree canopy within the parcel where the Project is located (APN # 028-240-061; Project Site). The locations, sizes, and condition of native oak trees (of the genus Quercus) were documented.

The tree survey focused on the approximate 23.5-acre area within the proposed security fence and proposed access road (Project Area). In addition, the canopy area for oak trees within the subject parcel (Project Site) but outside the Project Area were mapped.

This report serves to document the methods and results of the oak tree and canopy mapping survey, describes the condition of the oak woodland on the subject property, and analyzes the potential Project impacts to oak woodland canopy.

1 INTRODUCTION

1.1 BACKGROUND AND PROJECT DESCRIPTION

The La Porte Road Solar Project is a small-scale utility solar generation project located on approximately 23.5 acres of an 82-acre parcel located just northeast of the unincorporated community of Bangor in Butte County, California. The Project is located at 5864 La Porte Road (APN # 028-240-061). Wildcat Renewables, LLC has entered into a long-term lease agreement with the property owner (Ross W. McGowan Trust) to facilitate the development of a small-scale, solar energy generating facility.

The Project will generate a total of 3.0 megawatts (MW) alternating current (AC) (4.2 MW direct current [DC]) of clean, reliable solar energy when complete. The Project will interconnect to Pacific Gas and Electric Company's (PG&E's) pre-existing electrical distribution system located on site. The power generated from this facility will be sold to PG&E through a long-term Power Purchase Agreement (PPA). Additionally, the Project will be equipped with energy storage technology that will allow on site renewable energy generation to be stored and dispatched onto the grid when needed.

The Project will utilize approximately 7,776 solar modules and 24 string inverters to convert the sun's energy into usable, AC power. Single-axis tracking technology will be utilized to allow the modules to efficiently track the sun throughout the day and maximize the efficiency of solar collection. The modules will be mounted on a steel racking system, which will be anchored into the ground using driven steel piers. The overall height of the array will be no more than 15-feet tall. See Attachment A for the project site plan.

1.2 PROJECT LOCATION

The approximate 82-acre parcel is located on the east side of La Porte Road, approximately 0.35-mile northeast of the intersection of Los Verjeles Road and La Porte Road (Figure 1). The parcel is surrounded primarily by rural residential properties where grazing and small-scale agricultural practices are common.

The Project Area is located at an elevation of approximately 800-900 feet above mean sea level in the foothills of the Sierra Nevada. No structures are located in the Project Area; however, a residence is located in the northern portion of the parcel.

The Project Area is situated within Township 18 North, Range 5 East, and Section 27 of the Bangor 7.5-minute U.S. Geological Survey (USGS) quadrangle. The corresponding latitude and longitude at the approximate center of the Project Area is 39°23'36.33" north latitude and 121°23'57.49" west longitude.

2 REGULATORY SETTING

2.1 SENATE BILL 1334

Senate Bill (SB) 1334 (Oak Woodlands Conservation: Environmental Quality) passed in 2004, and requires counties with oak woodlands to consider significant impacts as defined in the California Environmental Quality Act (CEQA) for all non-agricultural projects affecting oaks, and to develop an oak woodlands management plan.

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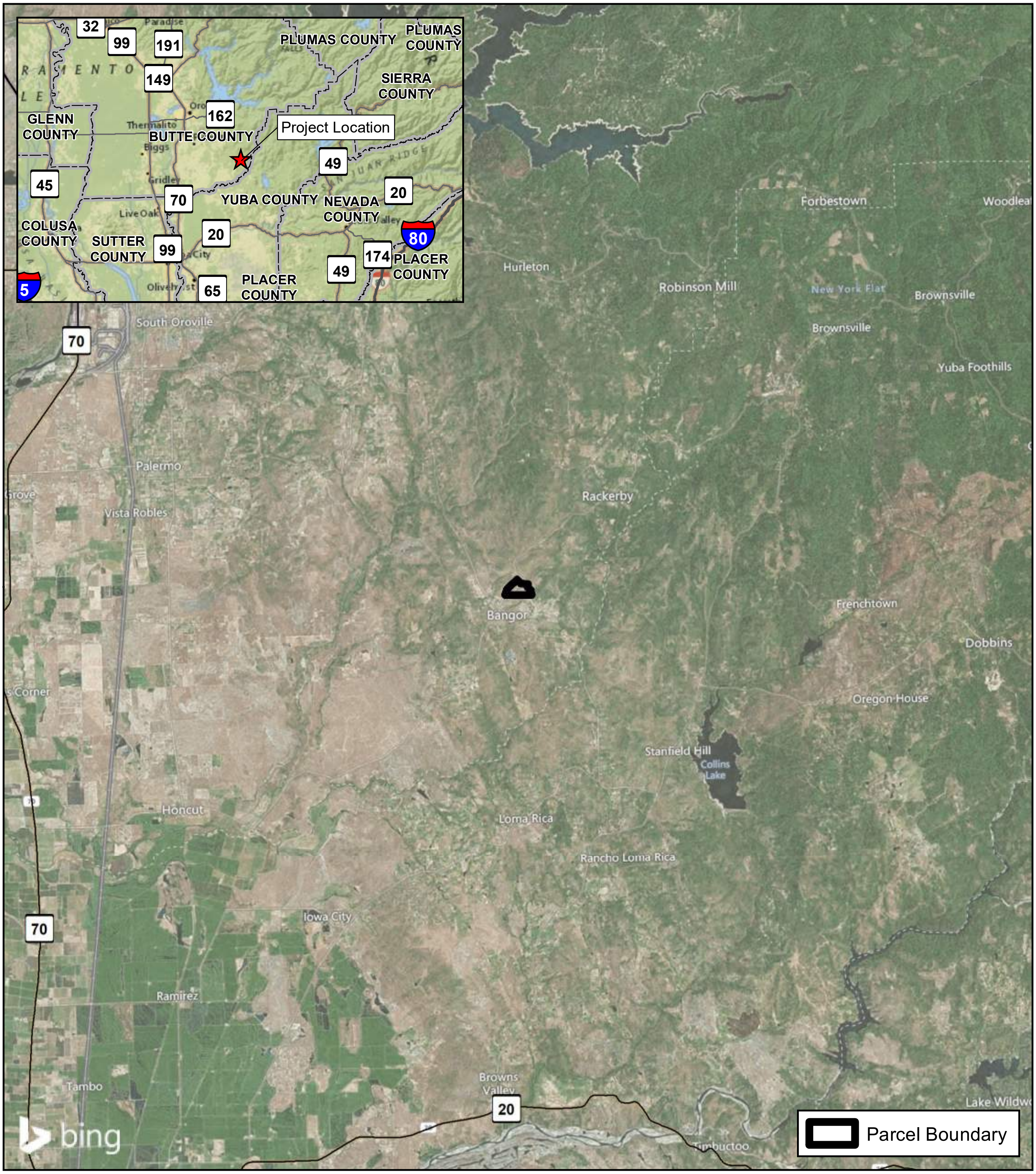

Source: Bing Maps

0 1.5 3 Miles

0 2.5 5 Kilometers

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Scale 1:190,080
1 in = 3 miles

Figure 1. Regional Vicinity
RPCA La Porte Road
Solar Project
Butte County, California

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2.2 BUTTE COUNTY DRAFT OAK WOODLAND MITIGATION ORDINANCE

The Butte County Draft Oak Woodland Mitigation Ordinance (ordinance; Butte County 2018a) sets standards for oak canopy retention and establishes an in-lieu payment methodology for oak canopy removal for discretionary projects. Projects that require the removal of oak canopy and/or trees but are less than the thresholds established under the CEQA Significance Criteria are not considered a potentially significant impact and do not require mitigation to reduce impacts to Less Than Significant levels. Under the ordinance, oak trees and canopy are defined as:

- native tree species in the genus *Quercus* not designated as Group A or Group B commercial species pursuant to regulations adopted by the State Board of Forestry and Fire Protection pursuant to Public Resources Code Section 4526,
- and that are five (5) inches or more in diameter at breast height ([DBH]; (i.e., the diameter of the trunk at 4.5 feet above natural grade).
- Oak canopy is defined as the surface area directly under the live branches of oak trees.
- Oak woodland is defined as any oak tree or group of oak trees. Project site land where a majority of living trees are native oaks and with 10 percent or greater oak canopy cover. The 10 percent canopy cover standard applies to the individual stand of oaks and not to the entire project site; consequently, a project site may contain one or more oak woodland.

The provisions of the ordinance apply to discretionary projects that result in land development and removal of oak canopy or disturbance to the critical root zone (CRZ; a circle on the ground around a tree that generally corresponds to the drip line of the tree[1]). The ordinance requires preparation of an Oak Woodland Evaluation Plan for discretionary projects to document existing conditions and the extent of oak woodland area that could be adversely impacted by construction and operation of a proposed project or new development.

Discretionary projects are subject to the following thresholds of significance regarding removal of oak canopy and/or oak trees:

1. Oak Canopy Thresholds of Significance
    a. **Less than significant impact, no mitigation required.** Oak canopy mitigation shall not be required for projects that meet the following standards:
        i. Ten percent or less of the oak canopy is removed;
        ii. Where the oak woodland is of a severely degraded condition, then up to 10 oak trees, regardless of whether the number exceeds the 10 percent canopy, may be removed without a replacement requirement.

[1] *The Oak Woodland Technical Manual (Butte County 2018b) defines the CRZ as "a radius equal in feet to the number of inches of a tree's trunk DBH, with a minimum of eight feet" which differs from the ordinance definition of dripline.*

b. **Less than significant impact with mitigation required.** Removal of oak canopy exceeding the thresholds above is reduced to a level of less than significant through oak canopy mitigation. Mitigation shall be required for removal of over 10 percent and up to 70 percent total oak canopy cover.

c. **Independent evaluation required.** If the total removal of oak canopy exceeds 70 percent, alternative analysis is required to determine if the impact can be reduced to a level of less than significant.

2. Oak Tree Removal and Additional Requirement:

    a. The removal of any oak tree within the less than significant canopy removal threshold that is 24 inches DBH or greater shall be replaced at a ratio of 2:1 for the oak canopy removed.

2.2.1 OAK CANOPY MITIGATION

If a project exceeds the removal thresholds described above, then direct replacement of trees or contribution of funds or dedication of land inside Butte County boundaries must occur. Mitigation shall be of similar species mix, density of oak canopy, of the type of oak woodland found on the project site, and viability as would be found in a naturally occurring and healthy oak woodland. The project shall include one of a combination of the following measures as mitigation:

1. Conservation easement
2. Payment to a mitigation bank
3. Payment to an accredited land trust
4. Payment to the State Oak Woodlands Conservation Fund

2.2.2 OAK CANOPY REPLACEMENT RATIO

1. A 2:1 replacement ratio shall apply to the removal of more than 10% and up to 50% of the total oak canopy.
2. A 3:1 replacement ratio shall apply to removal that exceeds 50% and up to 70% of the total oak canopy
3. Replacement ratios for oak canopy removal exceeding 70% requires alternative analysis.
4. Replanting within the project site does not count toward the replacement ratio requirements.

Table 1: Oak Canopy Replacement Ratios by Percent Removal[2]

Percent Range	0 to 10%	10.1% to 50%	50.1% to 70%	70.1% to 100%
Replacement	None	2:1 Replacement Ratio	3:1 Replacement Ratio	See Section 53-5 of ordinance (additional analysis)

Note: the replacement ratios apply to the percentage removal of oak canopy within the range. For example, at 28% canopy removal, the mitigation requirement is for the 18% that exceeds the 10% less-than-significant portion of the canopy removal.

The total oak canopy area for mitigation shall be calculated by the area of oak canopy proposed for removal multiplied by the respective replacement ratios by percent removal.

Where a County approved conservation easement, mitigation bank or accredited land trust carries out the mitigation through replanting, the replanting shall be similar to the oak canopy removed or the following minimum replacement standard, whichever is greater. The minimum replacement planting standard is one or a combination of the following:

1. Replacement trees: 200 trees (sapling in 1-gallon or greater) per acre of replacement oak canopy.

2. Replacement acorns: 600 acorns per acre of replacement oak canopy

2.3 OAK WOODLAND TECHNICAL MANUAL

The Oak Woodland Technical Manual (manual; Butte County 2018b) is a companion document to the ordinance that establishes specific technical regulations, standards and specifications necessary to implement the ordinance.

3 METHODS

3.1 DESKTOP MAPPING

A Kleinfelder geographic information system (GIS) specialist utilized publicly available aerial imagery to map tree canopies on the subject parcel. The aerial image and digitized data were uploaded to a mobile global positioning system (GPS) device and printed map for use during the field survey.

3.2 FIELD SURVEY

A field survey was performed by Kleinfelder Certified Arborist Susan Dewar on September 27 and 29, 2022, and May 11, 2023, to verify and edit the digitized tree canopies and to document species, size, and condition of oaks greater than five inches in DBH within the Project Area that are likely to be impacted by project activities. The arborist recorded the location of each oak tree trunk within the Project Area (or with CRZ within the Project Area) with a GPS unit capable

[2] *Source: adapted from "An Ordinance of the County of Butte Adding Chapter 53, Entitled "Development Mitigation," and Article I, Entitled "Oak Woodland Mitigation," to the Butte County Code" (Butte County 2018a)*

of sub-meter accuracy (Figure 2). The canopies of non-oak species or dead trees were clipped from the canopy outline to produce the final oak canopy area (Figure 2).

4 RESULTS

4.1 DESCRIPTION OF OAK WOODLAND

The parcel is composed primarily of non-native annual grasses and forbs with scattered patches of blue oak (*Quercus douglasii*) woodland. The majority of the oaks onsite are blue oaks, however interior live oak (*Quercus wislizeni*) and valley oak (*Quercus lobata*) are also present in low numbers. Other tree species present include foothill pine (*Pinus sabiniana*), willow (*Salix* spp.), and white mulberry (*Morus alba*). The species dominant within the non-native annual grassland of the understory and between the oaks included rattlesnake grass (*Briza maxima*), filaree (*Erodium* sp.), soft chess (*Bromus hordeaceus*), wild oats (*Avena* sp.), clover (*Trifolium* sp.), medusa head (*Elymus caput-medusae*), salt grass (*Distichlis spicata*), Italian thistle (*Carduus pycnocephalus*), yellow star thistle (*Centaurea solstitialis*), and tarweed (*Madia* sp.).

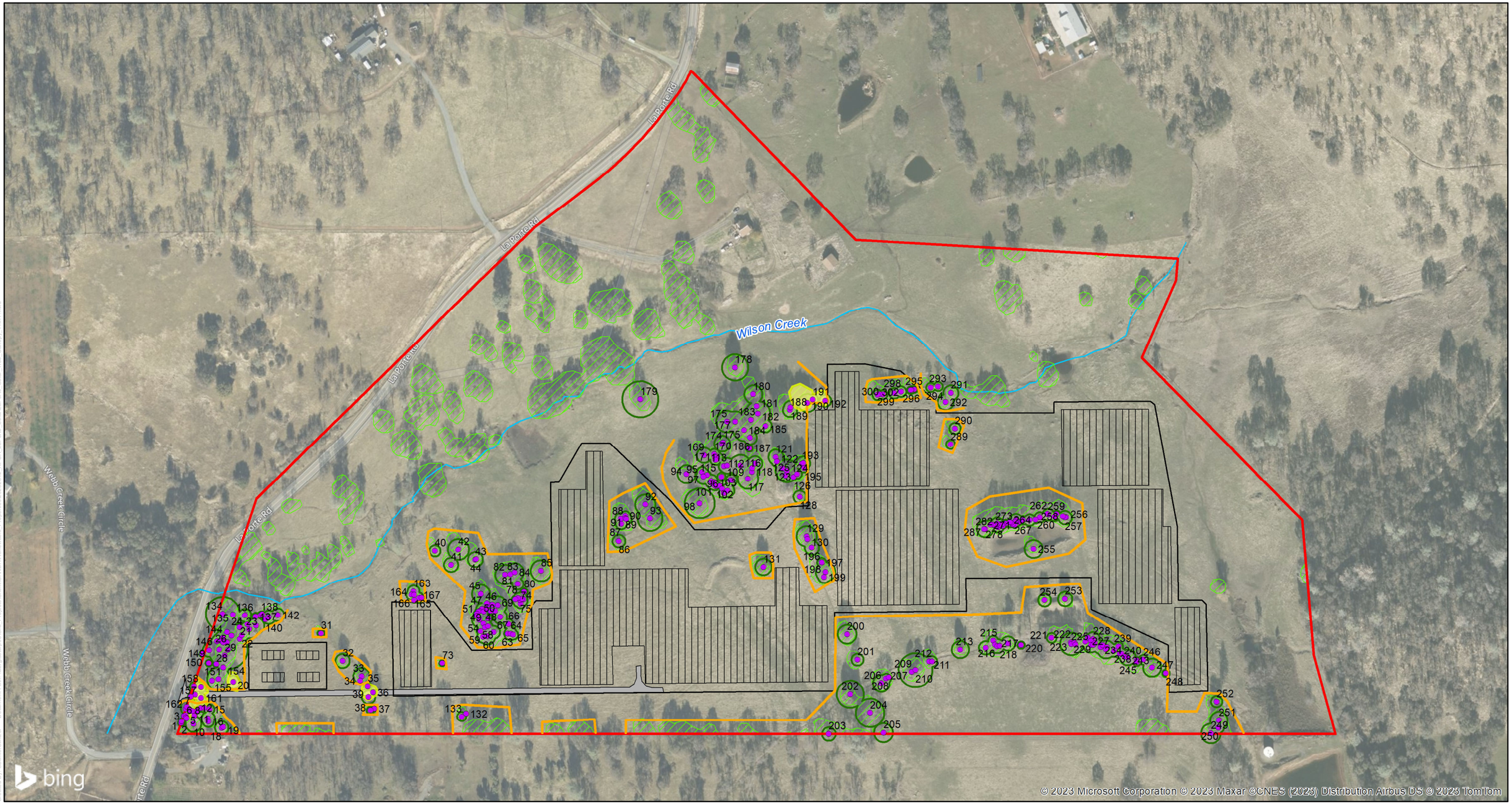
The site includes one residence in the northern portion of the parcel and a few small artificial impoundments, likely to provide water for livestock. There is presence of some invasive plant species such as yellow star thistle and Italian thistle. Many small trees are dead or severely drought stressed with thin canopies. Despite the drought and understory composition, the overall condition of the oak woodland would be considered “Intact” per the University of California Oak Woodland Impact Decision Matrix methodology (Butte County 2018a).

4.2 MEASURE OF CANOPY

A total of 9.91 acres of oak canopy is present on the Project Site (parcel). As designed, the Project will remove 0.10-acre of oak canopy for the proposed access road (1% of the oak canopy). The Project will not result in removal of any tree 24-inches DBH or larger. Since the Project will not result in removal of oak canopy acreage above the 10% threshold of significance replacement mitigation will not be required.

4.3 OAK WOODLAND TO REMAIN

The project has been designed to minimize fragmentation of the oak woodland to remain. Most major equipment associated with the project will be situated in non-native grassland along the southern portion of the parcel, adjacent to the neighboring house and other associated residential developments. The oak woodland along Wilson Creek, an intermittent waterway and potential wildlife corridor crossing the parcel from west to east, will be preserved in addition to large groups of oaks to the north and east of the array (Figure 2). The Wilson Creek corridor connects to large expanses of intact oak woodland east of the parcel and to some intact oak woodland across La Porte Road west of the parcel.



Project Location

Project Site /Parcel Boundary (79.38 acres)
Project Fence
Access Road
Solar Array
Protective Fencing
Wilson Creek
Critical Root Zone (4.56 acres)
Oak Canopy (9.91 acres)
Trunk Location
Potential Removal or Encroachment

0 125 250 Feet
0 40 80 Meters

N

Scale 1:3,000
1 Inch = 250 Feet

Tree Canopy and Trunk Location
RPCA La Porte Road Solar Project
Butte County, California

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4.4 FENCING PLAN AND PRESERVATION MEASURES

Trees that will remain within or adjacent to the work area will be demarcated by a protective barrier and signage to:

1. Keep foliage, branches and crown clear from contact with equipment, materials and activities;
2. Preserve roots and soil conditions in an intact and non-compacted state;
3. Visually identify the CRZ in which no soil disturbance is permitted and activities are restricted, unless otherwise approved.

A protective fence made of chain link or high visibility plastic mesh fencing will be placed five feet beyond the established CRZ of the tree or group of trees being protected adjacent to work areas under the approval of a qualified professional. Warning signs shall be prominently displayed on each fence to ensure avoidance of protected trees. The signs shall be a minimum of 16 x 24 inches, brightly colored and clearly visible from the ground and from vehicles. The signs must clearly indicate that the CRZ is a restricted area. The tree fencing shall be installed before any demolition, clearing, grading or other construction begins and shall remain in place until the final inspection by a qualified professional.

The ordinance (Butte County 2018a) defines the CRZ as the dripline while the manual (Butte County 2018b) defines CRZ as the radius in feet equal to the inches of a tree's DBH (with an 8-foot minimum distance for trees with DBH of 5-8"). Where possible, the more conservative (farther) distance will be utilized for placement of protective fencing.

Activities prohibited within the CRZ include:

- Grade changes
- Drainage changes
- The severing of roots over 2" in diameter (unless done with approval from a qualified professional)
- Heavy equipment use, vehicular traffic, parking of vehicles
- The use of tree trunks as winch support, anchorage, as a temporary power pole, signpost or other similar function
- Storage or dumping of construction materials, waste, or tools

Trenching, pipe or conduit installation within the CRZ must either be cut by hand, air spade, by mechanically boring a tunnel under the roots with a horizontal directional drill (hydraulic or pneumatic air excavation) or any other method approved by a qualified professional (Certified Arborist). Tunneling under a root system can greatly reduce damage to the tree as well as minimizing the cost of replacing landscaping or other features. Tunneling may be restricted by sloped areas or rocky soils. Once the pipe or conduit has been installed, the tunnel should be backfilled with excavated soil and the disturbed area should be irrigated the same day.

Compaction of soil around tree roots can impair tree development by restricting drainage and inhibiting new root growth. Damage from soil compaction can manifest years after construction activities take place. To ensure damage does not occur after construction, maintenance personnel should avoid driving vehicles over the CRZ and drip line of trees. If driving over these areas is unavoidable, tires should be deflated slightly to redistribute the weight over a larger area. If repeated crossings are required, up to six inches of mulch should be placed over the CRZ to prevent compaction. The mulch material shall be composed of two-inch untreated wood chip mulch or an approved equal per the qualified professional. Plywood can also be used to construct a temporary crossing bridge that distributes vehicle weight over

the CRZ. The contractor shall consult with a qualified professional to determine the best mitigation method and to review soil compaction mitigations before beginning construction.

If a tree or group of trees is adjacent to or in the immediate proximity to a grade slope of 8% (23 degrees) or more, then erosion control or silt barriers shall be installed outside the CRZ to prevent siltation and/or erosion within the CRZ. Erosion and sedimentation control barriers shall be installed or maintained in a manner which does not result in soil build-up within tree drip lines or CRZs.

The project contractor, consultant or manager will collaborate with a qualified professional to verify, in writing, that all pre-construction oak woodlands preservation conditions have been met as follows:

1. Tree fencing has been installed around any trees or tree areas that are to be preserved.
2. Erosion control has been secured on trees or tree areas that are to be preserved.
3. Tree pruning has been completed, if necessary.
4. Preventative measures for soil compaction have been installed.
5. A tree maintenance schedule has been established, if needed.

Written verification of the above conditions must be submitted to and approved by the Department of Development Services prior to the removal of oak trees.

Contractors or employees who will be interacting with trees or operating within the CRZ must attend a pre-construction meeting with a qualified professional. The meeting will be intended to ensure that all involved parties are aware of the tree protection measures and procedures that will be employed. The meeting will also review procedures, tree protections, hauling routes, staging areas and any other procedures deemed important by a qualified professional.

Additional measures for tree preservation during construction are detailed in the Oak Woodland Technical Manual (Butte County 2018b).

4.5 PROPOSED REPLACEMENT

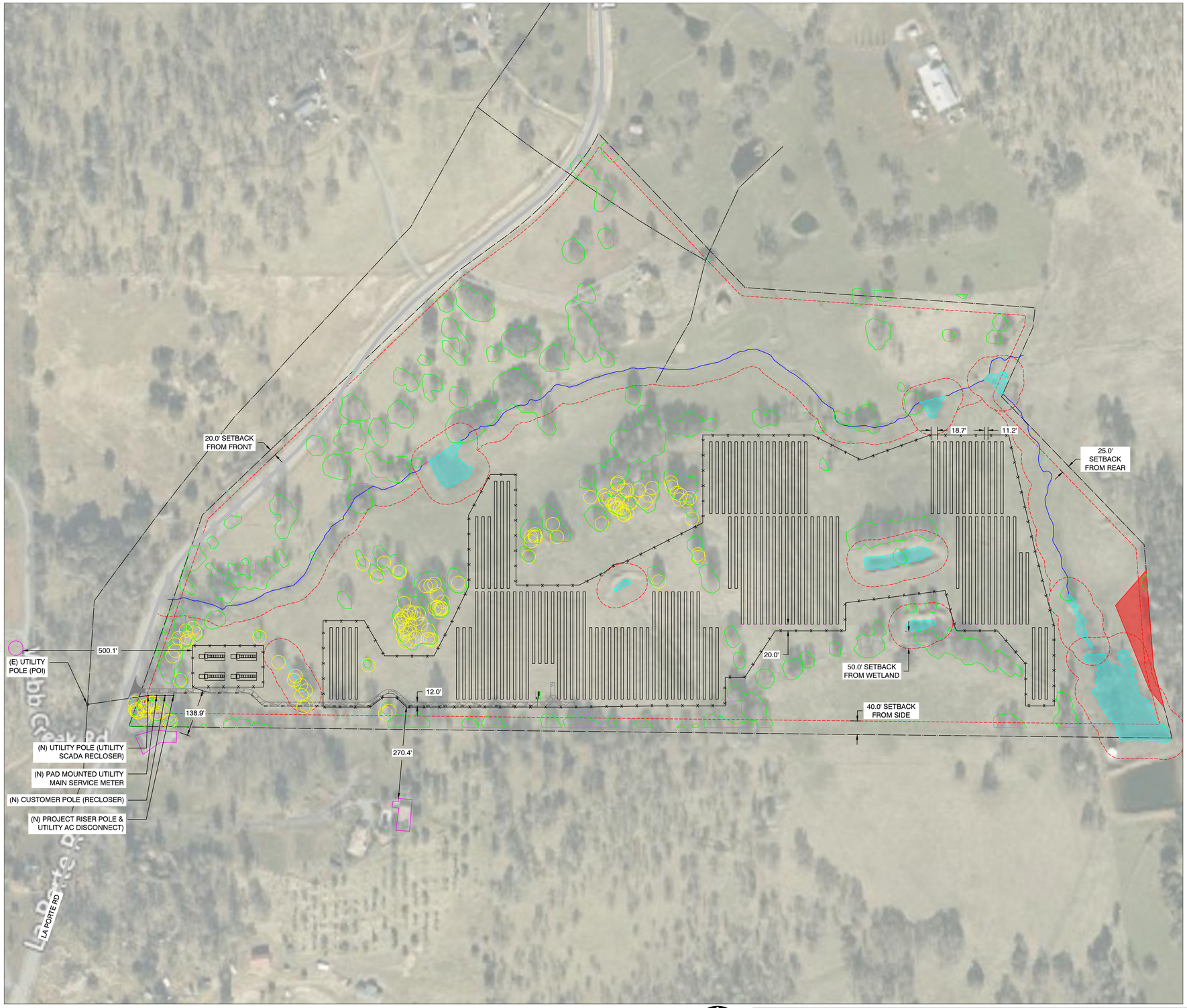
Since the threshold of significance of removal of 10% of oak woodland canopy area will not be exceeded and removal of trees with 24-inch or greater DBH will not occur, the Project does not require replacement planting. The Project will result in a less than significant impact, with no mitigation required.

5 REFERENCES CITED

Butte County. 2018a. *An Ordinance of the County of Butte Adding Chapter 53, Entitled "Development Mitigation," and Article I, Entitled "Oak Woodland Mitigation," to the Butte County Code.*

Butte County. 2018b. *Oak Woodland Technical Manual (Draft)*. Department of Development Services. Dated October 23.

ATTACHMENT A: RPCA LA PORTE SOLAR PROJECT SITE PLAN



1 ARRAY LOCATION
SCALE:1"=150'

N

SYSTEM SPECIFICATIONS

SYSTEM SIZE DC	4,203.36 kW
SYSTEM SIZE AC	3,000.00 kW
DC/AC RATIO	1.40
MODULE MANUFACTURER	VSUN
MODULE MODEL	VSUN540-144BMH
MODULE RATING	540 W
TOTAL MODULE QTY	7,784
MODULES PER STRING	28
TOTAL NO. OF STRINGS	278
INVERTER MODEL	SUNGROW SG125HV
INVERTER RATING	125 kW
INVERTER QTY	24
STEP-UP TRANSFORMER	12kV/600V, 3000kVA
RACKING	ATI HSAT
# OF 84 MODULE RACKS	50
# OF 56 MODULE RACKS	64
TILT ANGLE	0°
INTER-ROW SPACING	11.2'
PITCH	18.7'
GCR	40%
SITE AREA INSIDE FENCE	22.52 Ac
BESS DETAILS	
BESS DETAILS	3,000.00 kW
POI BESS CAPACITY	12,000 kWh
INVERTER MODEL	EPC POWER CAB1000/AC - 2L.1
TOTAL INVERTER QTY	2
# OF BESS CONTAINERS	4
* MAX SYSTEM OUTPUT @POI IS LIMITED TO 3MW.	

LEGEND

- ATI 84 MODULE TRACKER ROW
- ATI 56 MODULE TRACKER ROW
- POWER STATION - (1) MV TRANSFORMER, (1) DAS, (1) WEATHER STATION
- SUNGROW 125kW STRING INVERTER
- 12' WIDE SITE ACCESS GRAVEL ROAD
- SEASONAL WETLANDS
- LINEAR WATER FEATURES
- TREES
- 20' FROM TREE CANOPY
- CULVERT
- HIGH SLOPES
- (E) PUBLIC ROAD
- PROPERTY LINE
- PROJECT SITE SECURITY FENCE
- SETBACK
- (E) OH LINES
- MV CABLE
- EXISTING STRUCTURES

GENERAL NOTES

1. REFER TO SINGLE LINE DIAGRAM FOR DETAILS.
2. INSTALLATION TO COMPLY WITH NEC 2020 ARTICLE 690 AND ALL APPLICABLE LOCAL, STATE AND NATIONAL CODES OR REGULATIONS.
3. EQUIPMENT SHALL BE LABELED PER NEC 690 AND UTILITY REGULATIONS.
4. 12' ACCESS ROADS SHALL BE DESIGNED TO ACCOMMODATE ALL CONSTRUCTION, OPERATIONS, MAINTENANCE, AND UTILITY TRAFFIC THROUGHOUT THE SITE.
5. DIMENSIONS TO PROPERTY LINES AND EXISTING FEATURES ARE APPROXIMATE PENDING SURVEY.

NOT FOR CONSTRUCTION, FOR IA DISCUSSION ONLY.

REVISIONS

8	PRELIM LAYOUT	06/20/23
7	PRELIM LAYOUT	06/07/23

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SAN FRANCISCO, CA 94114
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575 LENNON LANE, SUITE 145
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FAX (925) 954-1220
WWW.SEQUOIA-ENGINEERING.COM
SEQUOIA ENGINEERING & DESIGN ASSOCIATES

PROJECT

LA PORTE ROAD SOLAR
LA PORTE ROAD,
OROVILLE,
CA 95966,
LAT: 39.392939°
LON: -121.401578°

SHEET TITLE

SITE PLAN

SCALE: AS SHOWN
DRAWN: LR
DATE: 06/16/23

PV-100

SHEET 2 OF 7

THIS DRAWING AND ITS CONTENTS ARE THE PROPERTY OF SEQUOIA ENGINEERING AND DESIGN ASSOCIATES AND MAY NOT BE USED OR REPRODUCED WITHOUT WRITTEN PERMISSION.

ATTACHMENT B: RPCA LA PORTE SOLAR PROJECT REPRESENTATIVE PHOTOS

Photo 1: View across Project area from southeast corner of array looking northwest (September 29, 2022)

Photo 2: View across Project area from southern edge center of array looking northwest (September 29, 2022)

Photo 3: View across Project area from southern edge center of array looking northeast (September 29, 2022)

Photo 4: View across Project area from southern edge center of array looking northwest (September 29, 2022)

Photo 5: View toward proposed Project access route along southwest edge of array looking west (September 29, 2022)

Photo 6: View toward proposed Project north of array looking south uphill into array area (September 29, 2022)

ATTACHMENT C: RPCA LA PORTE SOLAR PROJECT TREE INVENTORY WITHIN PROJECT AREA

Tree Number	Species	Trunk DBH (inches)	Estimated Canopy Diameter (feet)	Anticipated Impact (tree removal or encroachment on CRZ)
1	Blue Oak	9	20	No
2	Blue Oak	8	12	No
3	Blue Oak	6	10	No
4	Blue Oak	5	8	No
5	Blue Oak	6	8	No
6	Blue Oak	10	12	No
7	Blue Oak	14	25	No
8	Blue Oak	11	20	No
9	Blue Oak	12	25	No
10	Blue Oak	21	40	No
11	Blue Oak	6	10	No
12	Blue Oak	7	10	No
13	Blue Oak	10	10	No
14	Blue Oak	12	20	No
15	Blue Oak	13	20	No
16	Blue Oak	18	50	No
17	Blue Oak	15	40	No
18	Interior Live Oak	18	25	No
19	Interior Live Oak	12	25	No
20	Blue Oak	17	40	Possible encroachment on CRZ (tree within 25 feet of access road)
21	Blue Oak	11	12	No
22	Blue Oak	18	40	No
23	Blue Oak	24	40	No
24	Blue Oak	11	12	No
25	Blue Oak	10	12	No
26	Interior Live Oak	32	40	No
27	Interior Live Oak	36	60	No
28	Interior Live Oak	52	60	No
29	Interior Live Oak	10	30	No
31	Blue Oak	10	12	No
32	Blue Oak	19	40	No
33	Blue Oak	22	40	No
34	Blue Oak	6	12	No
35	Blue Oak	10	12	Likely removal- within 8 feet of access road
36	Blue Oak	6	10	Likely removal - within access road
37	Blue Oak	7	10	No
38	Blue Oak	10	12	No

Tree Number	Species	Trunk DBH (inches)	Estimated Canopy Diameter (feet)	Anticipated Impact (tree removal or encroachment on CRZ)
39	Blue Oak	23 (two stems, 9" and 14")	16	Likely removal - within 4 feet of access road
40	Blue Oak	15	20	No
41	Blue Oak	19	40	No
42	Blue Oak	28	40	No
43	Blue Oak	20	40	No
44	Blue Oak	15	30	No
45	Blue Oak	24	30	No
46	Blue Oak	19	20	No
47	Blue Oak	6	10	No
48	Blue Oak	9	10	No
49	Blue Oak	15	16	No
50	Blue Oak	10	16	No
51	Blue Oak	9	16	No
52	Blue Oak	9	12	No
53	Blue Oak	5	8	No
54	Blue Oak	20	40	No
55	Blue Oak	11	10	No
56	Blue Oak	9	10	No
57	Blue Oak	19	16	No
58	Blue Oak	12	16	No
59	Blue Oak	10	16	No
60	Blue Oak	16	10	No
61	Blue Oak	22	60	No
62	Blue Oak	17	60	No
63	Blue Oak	10	6	No
64	Blue Oak	17	40	No
65	Blue Oak	13	30	No
66	Blue Oak	13	20	No
67	Blue Oak	18	20	No
68	Blue Oak	14	20	No
69	Blue Oak	24	40	No
70	Blue Oak	14	36	No
71	Blue Oak	12	12	No
72	Blue Oak	7	16	No
73	Blue Oak	8	10	No
74	Blue Oak	13	24	No
75	Blue Oak	20	40	No

Tree Number	Species	Trunk DBH (inches)	Estimated Canopy Diameter (feet)	Anticipated Impact (tree removal or encroachment on CRZ)
76	Blue Oak	11	36	No
77	Blue Oak	9	20	No
78	Blue Oak	12	20	No
79	Blue Oak	10	20	No
80	Blue Oak	10	30	No
81	Blue Oak	15	30	No
82	Blue Oak	26	30	No
83	Blue Oak	22	40	No
84	Blue Oak	24	60	No
85	Blue Oak	28	60	No
86	Blue Oak	17	30	No
87	Blue Oak	15	30	No
88	Blue Oak	16	30	No
89	Blue Oak	13	40	No
90	Blue Oak	7	20	No
91	Blue Oak	14	40	No
92	Blue Oak	27	60	No
93	Blue Oak	33	60	No
94	Interior Live Oak	24	40	No
95	Blue Oak	14	30	No
96	Blue Oak	7	20	No
97	Blue Oak	20	40	No
98	Blue Oak	40	60	No
99	Blue Oak	17	20	No
100	Blue Oak	6	10	No
101	Blue Oak	15	30	No
102	Blue Oak	8	10	No
103	Blue Oak	13	30	No
104	Blue Oak	6	12	No
105	Blue Oak	6	12	No
106	Blue Oak	13	40	No
107	Blue Oak	9	20	No
108	Blue Oak	18	30	No
109	Interior Live Oak	15	30	No
110	Blue Oak	12	12	No
111	Blue Oak	11	12	No
112	Blue Oak	14	20	No
113	Blue Oak	21	50	No
114	Blue Oak	15	30	No
115	Blue Oak	10	30	No

Tree Number	Species	Trunk DBH (inches)	Estimated Canopy Diameter (feet)	Anticipated Impact (tree removal or encroachment on CRZ)
116	Blue Oak	29	30	No
117	Blue Oak	27	60	No
118	Blue Oak	16	40	No
119	Blue Oak	10	20	No
120	Blue Oak	19	20	No
121	Blue Oak	20	50	No
122	Blue Oak	14	36	No
123	Blue Oak	13	30	No
124	Interior Live Oak	30	50	No
125	Blue Oak	6	15	No
126	Interior Live Oak	7	15	No
127	Interior Live Oak	13	24	No
128	Interior Live Oak	17	24	No
129	Interior Live Oak	27	50	No
130	Blue Oak	18	50	No
131	Blue Oak	22	50	No
132	Blue Oak	5	8	No
133	Interior Live Oak	12	10	No
134	Blue Oak	45	40	No
135	Blue Oak	15	30	No
136	Blue Oak	17	30	No
137	Blue Oak	10	20	No
138	Blue Oak	9	10	No
139	Blue Oak	7	15	No
140	Blue Oak	8	12	No
141	Blue Oak	18	30	No
142	Interior Live Oak	17	20	No
143	Blue Oak	22	20	No
144	Blue Oak	6	10	No
145	Blue Oak	20	20	No
146	Blue Oak	10	20	No
147	Blue Oak	5	8	No
148	Blue Oak	5	8	No
149	Interior Live Oak	18	30	No
150	Blue Oak	8	18	No
151	Blue Oak	9	10	No
152	Blue Oak	9	12	No
153	Blue Oak	8	8	No
154	Interior Live Oak	15	40	No
155	Interior Live Oak	31	40	No

Tree Number	Species	Trunk DBH (inches)	Estimated Canopy Diameter (feet)	Anticipated Impact (tree removal or encroachment on CRZ)
155	Interior Live Oak	10	20	No
157	Blue Oak	14	15	Likely removal - within 10 feet of access road
158	Blue Oak	12	15	Likely removal - within 10 feet of access road
159	Blue Oak	14	20	Likely removal - within access road
160	Blue Oak	8	8	Likely removal - within access road
161	Blue Oak	12	15	Likely removal - within access road
162	Blue Oak	16	30	Possible encroachment on CRZ (tree within 25 feet of access road)
163	Blue Oak	16	30	No
164	Blue Oak	14	20	No
165	Blue Oak	8	8	No
166	Blue Oak	7	6	No
167	Blue Oak	14	20	No
168	Blue Oak	7	10	No
169	Blue Oak	20	40	No
170	Blue Oak	14	30	No
171	Interior Live Oak	10	12	No
172	Interior Live Oak	7	12	No
173	Blue Oak	14	20	No
174	Interior Live Oak	21	50	No
175	Interior Live Oak	12	20	No
175	Blue Oak	29	60	No
177	Interior Live Oak	28	50	No
178	Interior Live Oak	35	40	No
179	Blue Oak	48	60	No
180	Interior Live Oak	24	50	No
181	Blue Oak	12	40	No
182	Blue Oak	33	60	No
183	Interior Live Oak	32	60	No
184	Interior Live Oak	29	60	No
185	Blue Oak	17	40	No
186	Interior Live Oak	18	40	No
187	Blue Oak	9	12	No
188	Blue Oak	19	60	No
189	Interior Live Oak	18	40	No
190	Interior Live Oak	24	60	Possible encroachment on CRZ (security fence under canopy)
191	Blue Oak	14	25	Possible encroachment on CRZ (security fence under canopy)

Tree Number	Species	Trunk DBH (inches)	Estimated Canopy Diameter (feet)	Anticipated Impact (tree removal or encroachment on CRZ)
192	Blue Oak	16	30	Possible encroachment on CRZ (security fence under canopy)
193	Interior Live Oak	16	30	No
194	Blue Oak	18	15	No
195	Blue Oak	12	20	No
196	Blue Oak	19	25	No
197	Blue Oak	12	20	No
198	Blue Oak	26	40	No
199	Blue Oak	16	30	No
200	Blue Oak	25	60	No
201	Blue Oak	16	40	No
202	Interior Live Oak	36	50	No
203	Blue Oak	18	25	No
204	Blue Oak	38	60	No
205	Blue Oak	25	60	No
206	Blue Oak	22	50	No
207	Blue Oak	13	30	No
208	Blue Oak	6	10	No
209	Blue Oak	13	18	No
210	Interior Live Oak	45	60	No
211	Interior Live Oak	15	20	No
212	Blue Oak	14	30	No
213	Interior Live Oak	23	40	No
214	Blue Oak	18	60	No
215	Blue Oak	13	20	No
216	Blue Oak	16	40	No
217	Blue Oak	19	60	No
218	Blue Oak	10	12	No
219	Blue Oak	19	30	No
220	Blue Oak	10	20	No
221	Blue Oak	13	12	No
222	Blue Oak	9	12	No
223	Blue Oak	30	60	No
224	Blue Oak	14	40	No
225	Blue Oak	8	16	No
226	Blue Oak	14	25	No
227	Blue Oak	8	14	No
228	Blue Oak	18	30	No
229	Blue Oak	8	10	No
230	Blue Oak	20	40	No

Tree Number	Species	Trunk DBH (inches)	Estimated Canopy Diameter (feet)	Anticipated Impact (tree removal or encroachment on CRZ)
231	Blue Oak	10	20	No
232	Blue Oak	6	10	No
233	Blue Oak	13	25	No
234	Blue Oak	18	40	No
235	Blue Oak	10	20	No
236	Blue Oak	8	14	No
237	Blue Oak	24	60	No
238	Blue Oak	17	50	No
239	Blue Oak	12	40	No
240	Blue Oak	13	40	No
241	Blue Oak	14	50	No
242	Blue Oak	7	12	No
243	Blue Oak	21	60	No
244	Blue Oak	8	14	No
245	Blue Oak	11	25	No
246	Blue Oak	13	20	No
247	Blue Oak	24	50	No
248	Blue Oak	10	15	Possible encroachment on CRZ (security fence under canopy)
249	Blue Oak	26	40	No
250	Blue Oak	14	40	No
251	Blue Oak	23	40	No
252	Blue Oak	15	25	No
253	Interior Live Oak	19	40	No
254	Blue Oak	17	40	No
255	Valley Oak	24	40	No
256	Valley Oak	7	8	No
257	Valley Oak	18	30	No
258	Valley Oak	10	20	No
259	Blue Oak	10	20	No
260	Blue Oak	12	20	No
261	Valley Oak	16	20	No
262	Valley Oak	10	20	No
263	Blue Oak	14	14	No
264	Blue Oak	10	12	No
265	Valley Oak	15	40	No
266	Blue Oak	11	15	No
267	Blue Oak	8	10	No
268	Blue Oak	5	6	No
269	Interior Live Oak	16	10	No

Tree Number	Species	Trunk DBH (inches)	Estimated Canopy Diameter (feet)	Anticipated Impact (tree removal or encroachment on CRZ)
270	Valley Oak	17	30	No
271	Blue Oak	7	6	No
272	Blue Oak	8	10	No
273	Blue Oak	8	8	No
274	Valley Oak	12	20	No
275	Blue Oak	6	10	No
276	Blue Oak	10	30	No
277	Blue Oak	8	10	No
278	Blue Oak	8	12	No
279	Blue Oak	6	10	No
280	Valley Oak	14	30	No
281	Blue Oak	6	8	No
282	Blue Oak	6	8	No
283	Valley Oak	16	30	No
284	Valley Oak	6	8	No
285	Blue Oak	8	12	No
286	Blue Oak	12	14	No
287	Blue Oak	22	20	No
288	Valley Oak	9	14	No
289	Blue Oak	12	18	No
290	Blue Oak	15	16	No
291	Blue Oak	20	30	No
292	Blue Oak	21	40	No
293	Blue Oak	12	20	No
294	Blue Oak	12	14	No
295	Blue Oak	9	8	No
296	Blue Oak	10	18	No
297	Blue Oak	10	10	No
298	Blue Oak	14	30	No
299	Blue Oak	14	40	No
300	Blue Oak	12	30	No
301	Blue Oak	9	20	No
302	Blue Oak	14	40	No

APPENDIX - F

Aquatic Resources Mapping
December 2022

Kleinfelder
2882 Prospect Park Dr, Suite 200
Rancho Cordova, CA 95670
Phone: (916) 524-1667

To: Stephanie Loucas
Vice President of Development
Renewable Properties
(415) 710-3834
Stephanie@renewprop.com

From: Andy Mieske, Regulatory Specialist; Susan Dewar, Project Manager

Date: December 15, 2022

RE: RCPA La Porte Road Solar Project Aquatic Resources Mapping

Kleinfelder herein presents the results of an aquatic resources investigation conducted within a private land parcel (APN # 028-240-061) south of Wilson Creek in the community of Bangor in southeastern Butte County on November 19, 2022. This investigation located and mapped the boundaries of aquatic resources to allow for project planning on the site. Appendix A includes photographs of representative aquatic resources and Appendix B displays the location and extent of aquatic resources in the survey area. The following includes a brief overview of the methods used in this site investigation and a description of the aquatic resources identified onsite.

Methods. Senior Vegetation Ecologist and Regulatory Specialist Andy Mieske conducted the aquatic resources investigation in the field on November 19, 2022. The surveyor conducted the aquatic resources investigation following the routine method for wetland delineations as described by the United States Army Corps of Engineers (USACE) 1987 manual and supplemented as directed by the Interim Arid West Supplement (USACE 1987, 2006). The surveyor identified water features based on the presence of an ordinary high water mark and wetland features based on the presence of a predominance of hydrophytic vegetation and evidence of wetland hydrology in the field.

Results. The investigation identified the following non-tidal aquatic resources displayed on the map in Appendix B: one ephemeral channel, one unnamed intermittent channel, four segments of a named intermittent channel (Wilson Creek), seven seasonal wetlands, and one seasonal wetland complex. A variety of wetland and upland areas characterize the seasonal wetland complex. This mapping identified 2.222 acres of aquatic resources within the 57.934-acre survey area including 0.020 acre of ephemeral channel, 0.832 acre of intermittent channel, 0.606 acre of seasonal wetland, and 0.764 acre of seasonal wetland complex. The ephemeral channel, three seasonal wetlands in the middle of the survey area and the seasonal wetland complex lack a surface hydrologic connection to

down gradient waters. The seasonal wetland complex has been impounded by a narrow constructed berm and lies adjacent to the down-gradient seasonal wetland, but does not directly abut the seasonal wetland.

The seasonal wetland complex (Photo 1 in Appendix A) receives water from a white unmapped water tank south of the survey area. A berm constructed at the northern extent of the wetland complex impounds water. Water seeps subsurface through the berm to support a seasonal wetland north of the seasonal wetland complex and then flows within an unnamed intermittent channel (Photo 2 in Appendix A) within and outside the survey area through a seasonal wetland into a named intermittent channel (Wilson Creek, displayed in Photo 3 in Appendix A). Wilson Creek flows in a westerly direction through two excavated basin seasonal wetlands (westernmost displayed in Photo 4 in Appendix A) before exiting the survey area and draining into Honcut Creek, which flows into the Feather River, a traditional navigable water.

The southern extent of the ephemeral channel begins at the base of a slope-stabilizing wall of coarse angular rock. The ephemeral channel (Photo 5 in Appendix A) has a defined bed and bank and ordinary high water mark, evidenced by sediment transport. This ephemeral channel conveys water during and immediately following storm events over a slope with a 20 percent gradient but dissipates and lacks definition and evidence of sediment transport as the slope gradient flattens before reaching Wilson Creek.

The three isolated seasonal wetlands in the middle of the survey area (southernmost displayed in Photo 6 in Appendix A) have been created by excavating the land surface to a depth close enough to the seasonal water table, and constructing berms along the lower edges of the excavations, to create an aquic moisture regime upslope of the berms within the upper 12 inches of the soil profile for a sufficient period during the growing season to support a predominance of hydrophytes.

References Cited

U.S. Army Corps of Engineers (USACE) 1987. Corps of engineer's wetlands delineation manual. Technical Report Y-87-1. U.S. Army Engineers Waterways Experiment Station, Vicksburg, MS. 100 pp. plus appendices.

U.S. Army Corps of Engineers (USACE) 2006. Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region. ERDC/ EL TR-06-16. U.S. Army Corps of Engineers Research and Development Center, Vicksburg, MS.

Appendix A

Site Photographs (November 19, 2022)

Photo 1 **Impounded seasonal wetland complex receiving water from water tank**

Photo 2 **Intermittent channel conveying flow from uphill seasonal wetland to seasonal wetland adjacent to Wilson Creek**

Photo 3 **Intermittent channel (Wilson Creek)**

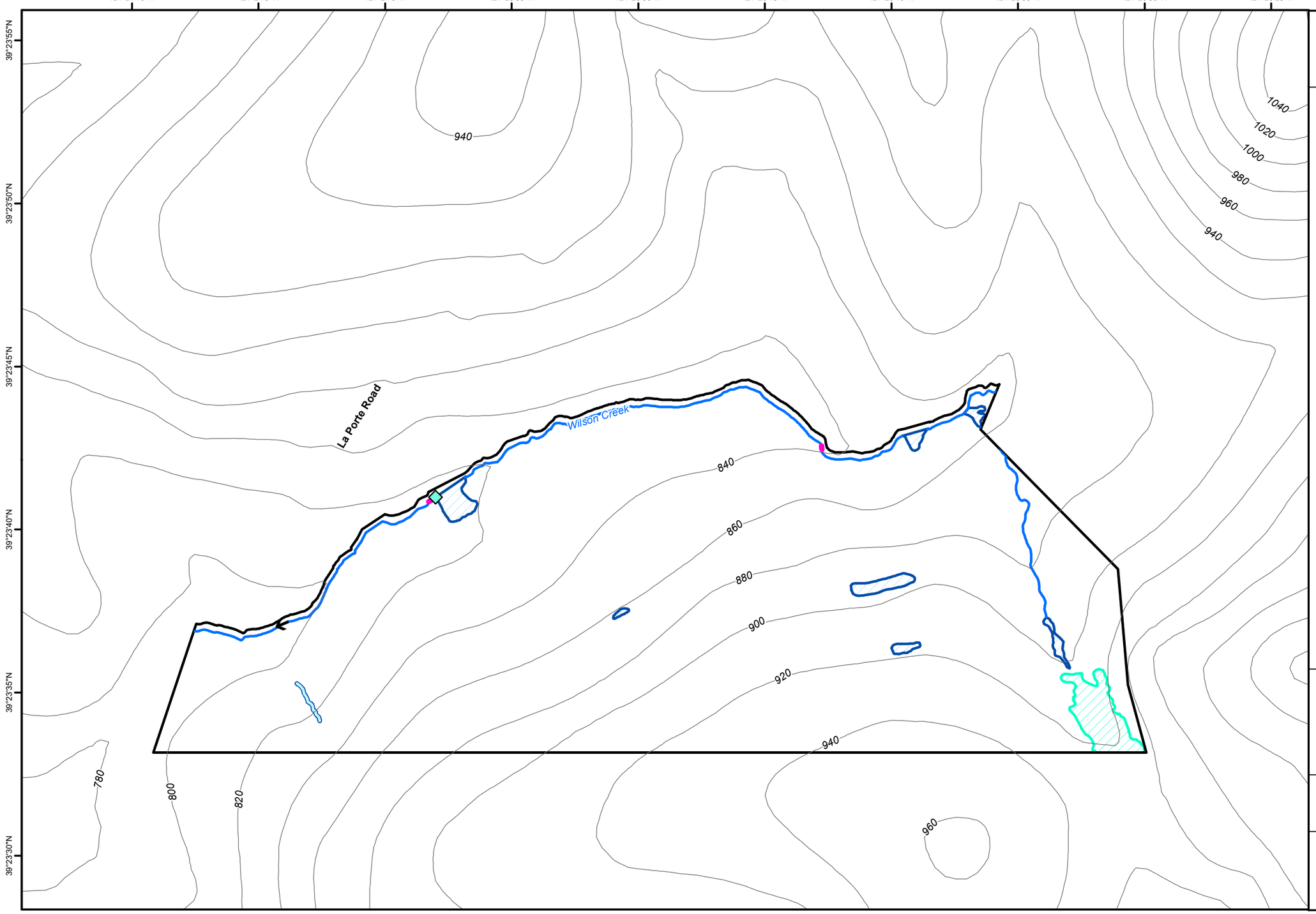
Photo 4 **Facing southeast: Seasonal wetland left of culvert gate able to release seasonal inundation through culvert beneath berm on right into intermittent channel**

Photo 5 Facing southeast: northern extent of isolated ephemeral channel

Photo 6 Isolated seasonal wetland excavated in middle of survey area (southernmost of the three hydrologically isolated seasonal wetlands)

Appendix B

Aquatic Resources Map



RCPA La Porte Road Solar Project December 2022

Legend

- Survey Area (57.934 ac.)
- Seasonal Wetland (0.606 ac.)
- Seasonal Wetland Complex (0.764 ac.)
- Culvert Gate
- Ephemeral Channel (0.020 ac.)
- Intermittent Channel (0.832 ac.)
- Culvert
- 20-foot Contour
- Direction of Flow

N

0 150 300 Feet

1 inch = 300 feet

Notes:
1. Acreage shown for each class refers to the entire delineation area.
2. Feature label key provided below.
3. ESRI World Imagery (9/7/2022)
4. Projection: UTM Nad 83 Z10N
5. Vertical datum NAVD88
6. Topographic elevation in feet

USGS 7.5' Quad: Bangor (1994)
PLSS: Section 22, 27; Township: 18N; Range: 05E

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Delineated by: Andy Mieske
Delineation Survey Date: 11/19/2022
Drawn By: Joseph Hiatt

[redacted]

Aquatic Resources

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