CALIFORNIA COASTAL COMMISSION
NORTH COAST DISTRICT
1385 8TH STREET, SUITE 130
ARCATA, CA 95521
PHONE: (707) 826-8950
WWW.COASTAL.CA.GOV

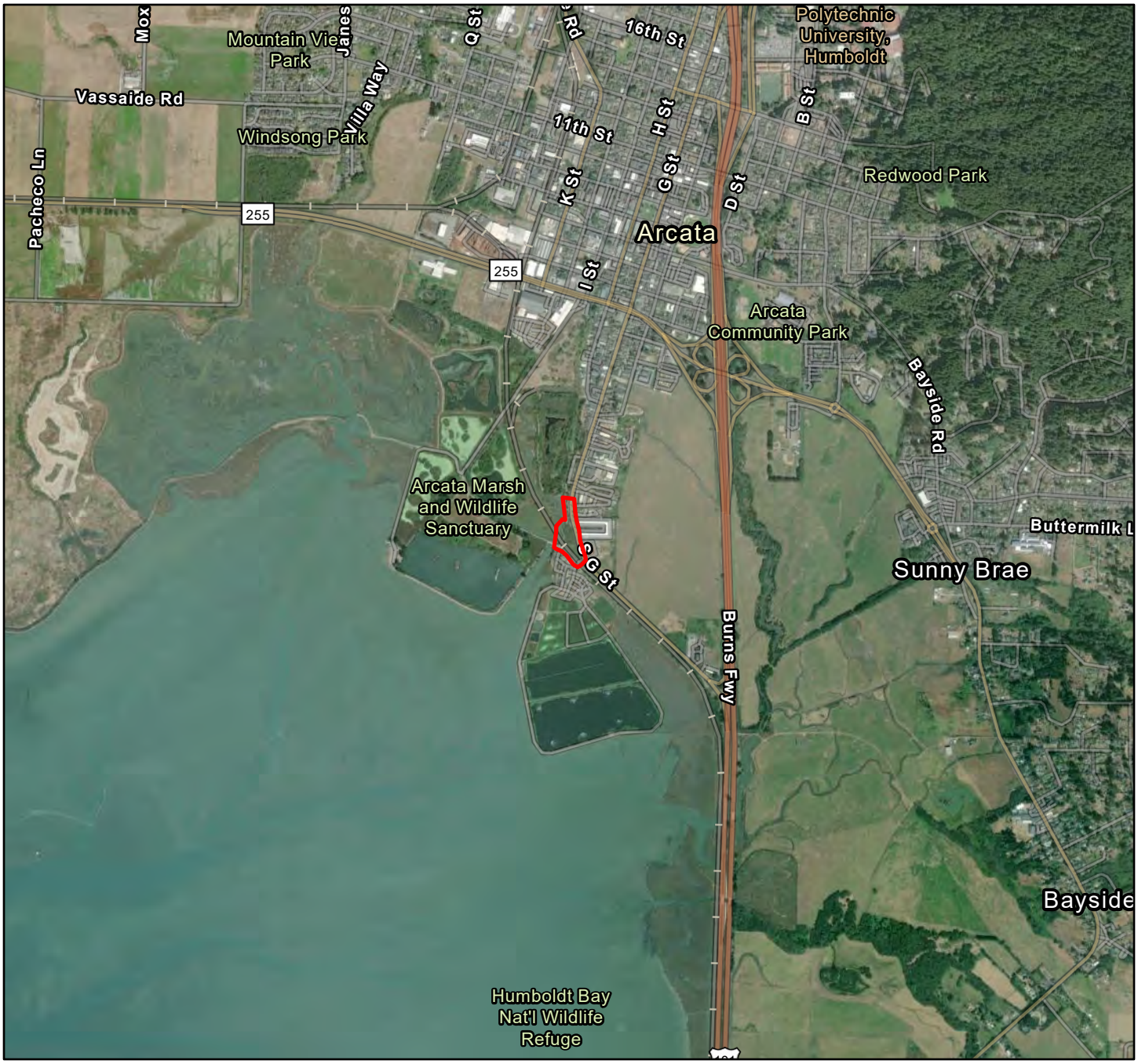
W11c

1-23-0808 (Pacific Gas and Electric Company)

May 8, 2024

EXHIBITS

Table of Contents



Legend

Study Area (100 ft Buffer)

VICINITY MAP

0 1,000 2,000 4,000
Feet

1:24,000 1 inch = 2,000 feet

Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS,World Imagery: Maxar,Hybrid Reference Layer: California State Parks, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA

FIGURE 1
Project Location
Pacific Gas and Electric
D-153
Arcat

\\DC1VS01\GISPROJ\P\PGE\PGE_ARCATA\MAPFILES\WETLAND_DELINEATION_ARCATA\WETLAND_DELINEATION_ARCAT

Exhibit 1
1-23-0808 (Pacific Gas & Electric Company)
Vicinity & Project Location Maps (pg. 1 of 2)

integral consulting inc.

Figure 1.
D-1537 Site and Vicinity Map

Exhibit 1
1-23-0808 (Pacific Gas & Electric Company)
Vicinity & Project Location Maps (pg. 2 of 2)

1 DESCRIPTION OF PROPOSED DEVELOPMENT

The D-1537 L-137B MP 6.448 ECDA Dig Project (project) involves the inspection and repair of a buried 8-inch gas transmission pipeline. Work areas will be established at two locations along the pipeline, EC20-137B-C and EC20-137B-D. Crews will access the EC20-137B-C and EC20-137B-D work areas via an existing concrete pathway. The EC20-137B-C work area is approximately 2,174 square feet, and the EC20-137B-D work area is approximately 2,275 square feet. The work areas will be grubbed and covered in construction matting, as necessary. Excavations (bell holes) measuring 12 feet long by 8 feet wide by 11 feet deep will be established around the pipeline in both work areas. The pipeline will then be inspected and repaired, as necessary. Repairs could include, but are not limited to, recoating, installation of a sleeve, or replacement of a segment of the pipeline. If the pipe is in very poor condition and needs to be replaced, construction will move forward with the contingency plan of excavating two (2) 6 feet long by 6 feet wide by 6 feet deep sniff holes to accommodate that replacement. The northern sniff hole work area is 89 square feet, and the southern sniff hole work area is 342 square feet.

The excavations will be shored and dewatered during construction. Crews will use open sump pumps to move discharge by dewatering line to the filtration staging area. Staging for filtration tanks would occur along South G Street in an area of approximately 4,447 square feet. All dewatering shall comply with state and local requirements concerning water discharges.

PG&E may use the following equipment on the site: excavator, backhoe, front loader, vacuum truck, work trucks, compressor, welding truck, x-ray truck, open sump pumps, and hand tools.

After the pipeline repairs are completed, excavations will be backfilled, construction materials and equipment will be removed, and the site will be restored to pre-construction conditions. Excavations will be backfilled with excavated or approved backfilling material. Disturbed soils will be stabilized with erosion control measures.

In total, the project will result in temporary disturbance of approximately 0.015 acre of freshwater wetlands and 0.089 acre of coastal scrub. All work areas will be returned to pre-construction conditions following construction.

Exhibit 2
1-23-0808 (Pacific Gas & Electric Company)
Project Description

EC20-137, D-1537
L-137B
ECDA INVESTIGATION DIG

ORDER #84021985

VICINITY MAP
NOT TO SCALE

GENERAL NOTES:

1. THIS DRAWING IS ISSUED FOR PERMIT. REFER TO CONTRACT DOCUMENTATION FOR ADDITIONAL CLARITY OF SCOPE OF WORK.
2. THIS DRAWING HAS BEEN CREATED BY REVIEW OF THE AS-BUILT DRAWINGS & RECORDS. ACCURACY IS DEPENDENT UPON THE SOURCE DOCUMENTS LISTED IN THE REFERENCE DOCUMENTS.
3. UTILITIES SHOWN ON DRAWING ARE APPROXIMATE BASED UPON REVIEW OF PG&E DIG SHEET, DIGS BASIS MEMO, & GIS. CONTRACTOR TO CALL USA TO HAVE LOCATION OF THESE FACILITIES MARKED & POTHOLE TO EXPOSE/VERIFY LOCATION.

CONSTRUCTION NOTES:

1. UNDERGROUND SERVICE ALERT : CALL 811 (1-800-227-2600) A MINIMUM OF 2 BUSINESS DAYS (NOT INCLUDING INITIAL DAY OF CONTACT) IN ADVANCE FOR THE MARKING OF UNDERGROUND UTILITIES, INCLUDING ALL NON-UTILITIES BEFORE YOU DIG, GRADE, OR EXCAVATE.
2. UTILITY NOTES:
   - A. DIMENSIONS SHOWN ON THESE DRAWINGS ARE BASED ON THE BEST AVAILABLE INFORMATION FROM SEVERAL SOURCES, & SHALL BE VERIFIED IN THE FIELD BY CONSTRUCTION PERSONNEL PRIOR TO EXCAVATION.
   - B. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE & LOCATION OF UNDERGROUND UTILITIES, PROPERTY LINES, & OTHER SUBSTRUCTURES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE, UNLESS OTHERWISE NOTED. CONSTRUCTION PERSONNEL ARE RESPONSIBLE FOR MAKING ALL DETERMINATIONS AS TO THE TYPE & LOCATION OF UNDERGROUND UTILITIES & OTHER SUBSTRUCTURES AS NECESSARY TO AVOID DAMAGE OR ENCROACHMENTS.
   - C. PROSPECTING IS REQUIRED AHEAD OF WORK.
   - D. ALL EXCAVATIONS WITHIN EXISTING STATIONS SHALL BE HAND DUG OR EXCAVATED USING SOFT DIG METHODS (e.g. VACUUM EXCAVATIONS OR SIMILAR).
3. COATING REMOVAL:
   BEFORE REMOVING THE PIPE COATING ON PRE-1972 PIPE (DOES NOT INCLUDE PLASTIC TAPE OR FUSION BONDED EPOXY COATINGS) THE FOLLOWING STEPS SHALL BE TAKEN:
   - A. FOR ALL NON-EMERGENCY WORK, PRE-1972 PIPE WRAP MUST BE EVALUATED TO DETERMINE IF IT CONTAINS ASBESTOS PRIOR TO REMOVAL.
   - B. FOR EMERGENCY WORK ON PRE-1972 PIPE, ASSUME THE WRAP CONTAINS > 1% ASBESTOS UNTIL THE WRAP CAN BE TESTED.
   - C. OBTAIN SAMPLES OF THE WRAP, & HAVE SAMPLES TESTED FOR ASBESTOS IN ACCORDANCE WITH WP 4711-01.
   - D. TEST RESULTS ARE TO BE INCLUDED WITH THE FINAL JOB PACKAGE.
   - E. FOLLOW PROCEDURE IN WP 4711-01 FOR REMOVAL OF PIPE WRAP.
4. RESTORATION & CLEAN UP:
   - A. RESTORATION OF PUBLIC STREETS, SIDEWALKS, CURBS, ETC. ABOVE PIPE BEDDING SHALL BE IN ACCORDANCE WITH THE LATEST CITY, COUNTY, OR AGENCY STANDARDS.
   - B. WHEREVER THERE ARE ROW CROPS, THE TOPSOIL SHALL BE REMOVED TO A DEPTH OF 12" & STORED ON SITE. UPON COMPLETION OF CONSTRUCTION, THE TOPSOIL SHALL BE RESTORED. TAKE CARE TO PREVENT MIXING OF TOPSOIL & SUBSOIL.
5. WELDING REQUIREMENTS:
   - A. INSTALL TEST STATIONS WITH THERMITE WELD CONNECTION IN ACCORDANCE WITH GAS T & D CORROSION CONTROL MANUAL O-10, O-10.1, & O-10.2.
6. PAINTING & COATING REQUIREMENTS:
   - A. ALL EXPOSED PIPE & FITTINGS ARE TO BE PAINTED IN ACCORDANCE WITH GAS STANDARD E-30. ALL COATING ON BURIED PIPE & FITTINGS ARE TO BE APPLIED IN ACCORDANCE WITH GAS STANDARD E-35.
   - B. FOR COATING SELECTIONS ON BURIED PIPE, SEE DIRECT BURIAL COATING SELECTIONS TABLE.
7. DOCUMENTATION OF INSPECTION OF EXISTING PIPELINE:
   WHENEVER EXISTING BURIED GAS FACILITIES ARE EXCAVATED DURING ENGINEERING OR DURING CONSTRUCTION, AN A-FORM (TD-4110P-03-F01) SHALL BE COMPLETED FOR THE GENERAL INSPECTION. THIS ALSO APPLIES TO GAS FACILITIES BEING DEACTIVATED. THE COMPLETED A-FORM SHALL BE SUBMITTED WITH THE FINAL JOB PACKAGE.
8. COPIES OF REFERENCE DRAWINGS ARE AVAILABLE TO FIELD PERSONNEL (PG&E, INSPECTION OR CONTRACTOR) ON AN AS NEEDED BASIS. CONTACT THE CONTRACT ENGINEER IDENTIFIED IN CONTACTS TO OBTAIN COPIES OF REFERNECE DRAWINGS.

CONTACT INFORMATION:

MICHELS, PROJECT MANAGER
Jordan Calkins (920)-579-4198
PLE, PG&E ENGINEER
Patrick Huddleson (925)-979-8007
DA, PG&E ENGINEER
Sergio Maciel (510)-717-7265

SEQUENCE OF OPERATIONS:

1. INSTALL BMPS.
2. EXCAVATE & EXPOSE PIPELINE AS SHOWN IN LOCATION IMAGE(S) & IDENTIFIED IN ECDA DIG SHEET (FORM N).
3. COMPLETE PIPELINE INSPECTION IN ACCORDANCE WITH RMP-09 PROCEDURE FOR EXTERNAL CORROSION DIRECT ASSESSMENT.
4. COMPLETE "H" FORM INSPECTION.
5. PERFORM REPAIRS AS NEEDED.
6. RECOAT THE PIPELINE IN ACCORDANCE WITH GAS STANDARD E-35.
7. COMPLETE DOCUMENTATION AS REQUESTED BY THE PROJECT ENGINEER.
8. BACKFILL & COMPACT EXCAVATION PER PERMIT STANDARDS.
9. INSTALL PG&E GAS WARNING DECALS & PIPELINE MARKER DECALS AS NEEDED.
10. REMOVE BMPS.
11. RESTORE PROJECT SITE.

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NO.	DATE	DESCRIPTION	GM/SPEC	DWN	CHKD	SUPV	APVD BY
C	7/21/2023	MODIFY PRINTS	84021985	TRJ			
B	5/3/2023	MODIFY PRINTS	84021985	RML			
A	2/20/2023	ISSUED FOR PERMIT	84021985	RML			

REVISIONS

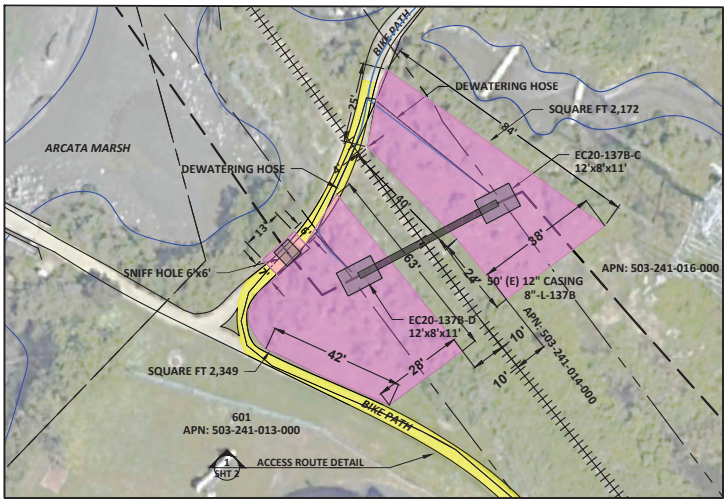
APPROVED BY	
	GM
	SUPV
	DSGN
	DWN RML
	CHKD
	OK
	DATE 8/2/2023
	SCALES AS SHOWN

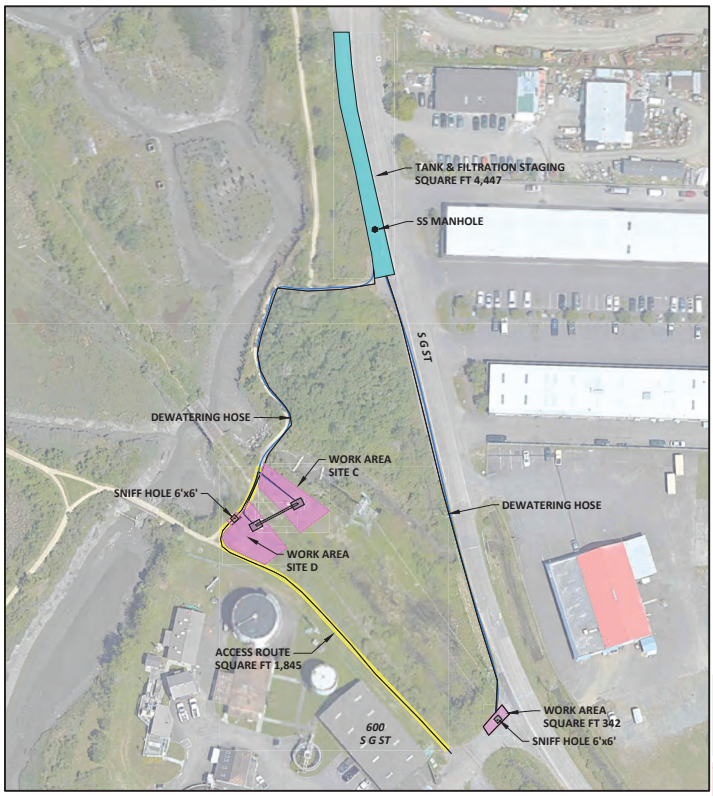
EC20-137B, D-1537
L-137B
ECDA EXCAVATION DIG
ARCATA, CALIFORNIA

84021985	JOB # 23056807	SHEET 1 OF 3	C REV

Exhibit 3
1-23-0808 (Pacific Gas & Electric Company)
Project Plans (pg. 1 of 3)

EC20-137B-C & D:
600 S G ST
ARCATA, CA
(SCALE: 1" = 30')





ACCESS ROUTE DETAIL
SCALE: NTS
1 SHT 2

EC20-137B-C:
L-137B, DIG MP: 6.448, STATION: 6+30
REGION: 3A, PRIORITY: MON
DEPTH to T.O.P.: 42"
EXCAVATION DEPTH: 132"
CENTER OF BELL HOLE: 40.8563764, -124.0900403
PIPE : 8.625" OD x 0.188" WT
CASING: 12", LENGTH: 50'
MAOP: 350 psig, YEAR INSTALL: 1958

EC20-137B-C:

POST BACKFILL AS-BUILT STAMP (To be filled out by inspector)	DATE
Pipe Protection Installed? Y / N If yes specify Type (CIRCLE ONE) (ex; Rock shield, Stargaurd, etc)	
PIPE ZONE BACKFILL MATERIAL: NATIVE / SAND / OTHER (CIRCLE ONE)	
FINAL BACKFILL MATERIAL NATIVE / AGGREGATE BASE / OTHER (CIRCLE ONE)	
P/S (mv)	
Inspector: (Print Name) ID Signature:	

EC20-137B-D:
L-137B, DIG MP: 6.457, STATION: 6+90
REGION: 3A, PRIORITY: MON
DEPTH to T.O.P.: 80"
EXCAVATION DEPTH: 132"
CENTER OF BELL HOLE: 40.8563110, -124.0901942
PIPE : 8.625" OD x 0.188" WT
CASING: 12", LENGTH: 50'
MAOP: 350 psig, YEAR INSTALL: 1958

EC20-137B-D:

POST BACKFILL AS-BUILT STAMP (To be filled out by inspector)	DATE
Pipe Protection Installed? Y / N If yes specify Type (CIRCLE ONE) (ex; Rock shield, Stargaurd, etc)	
PIPE ZONE BACKFILL MATERIAL: NATIVE / SAND / OTHER (CIRCLE ONE)	
FINAL BACKFILL MATERIAL NATIVE / AGGREGATE BASE / OTHER (CIRCLE ONE)	
P/S (mv)	
Inspector: (Print Name) ID Signature:	

NOTES:
- Backfill to PG&E Standards A-03
- Backfill to City/County Permit & Standards
- CTS/ETS Install to Standard O-10

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REVISIONS

APPROVED BY: GM, SUPV, DSGN, DWN RML, CHKD, OK, DATE 8/2/2023, SCALES AS SHOWN

EC20-137B, D-1537
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84021985 | JOB # 23056807 | SHEET 2 OF 3 | C REV

Exhibit 3
1-23-0808 (Pacific Gas & Electric Company)
Project Plans (pg. 2 of 3)

LEGEND:

	PROPOSED GAS TRANSMISSION LINE
	EXISTING GAS TRANSMISSION LINE
	GAS TRANSMISSION LINE (TO BE RETIRED)
	GAS TRANSMISSION LINE (TO BE REMOVED)
GD	GAS DISTRIBUTION LINE
GS	GAS SERVICE LINE
GT	GAS TRANSMISSION LINE (RETIRED)
GD	GAS DISTRIBUTION LINE (RETIRED)
GS	GAS SERVICE LINE (RETIRED)
ET	ELECTRIC TRANSMISSION LINE
ED	ELECTRIC DISTRIBUTION LINE
ES	ELECTRIC SERVICE LINE
T	TELEPHONE LINE
TV	CABLE TV LINE
SD	STORM DRAIN LINE
SS	SEWER LINE
W	WATER LINE
L	COMMUNICATION LINE
FO	FIBER OPTIC LINE
EP	EDGE OF PAVEMENT
FC	FACE OF CURB
X	FENCE
	WALL
	K-RAIL
	GUARD RAIL

	PIPE END CUT (SIDE)
	PIPE END CUT
	CENTER LINE
CATS	COMPUTER AUTOMATED TEST STATION
CTS	COUPON TEST STATION
ETS	ELECTROLYSIS TEST STATION
	GAS VALVE
G	GAS VAULT
	INSULATION JOINT
	PRESSURE CONTROL FITTING
	GAS VENT
	POTHOLE

E	ELECTRIC VAULT
	UTILITY POLE (ELECTRIC)
	UTILITY POLE (OTHER)
	JOINT POLE
W	WATER METER
	WATER VALVE
	STORM DRAIN
	SEWER MANHOLE
	TIE-IN-WELD
	TREE
	AGM
F	FIRE HYDRANT

ACRONYM DEFINITION:

(E)	Existing
(P)	Proposed
API	American Petroleum Institute
APN	Assessor's Parcel Number
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing Materials
BBCL	Bell Bell Chill Ring
BC	Back of Curb
BD	Blowdown
BOM	Bill(s) of Material
BTU	British Thermal Units
CATS	Computer Automated Test Station
CL	Centerline
CP	Cathodic Protection
CTS	Coupon Test Station
DCUST	Distribution Customer
DEG	Degree
DET	Detail
DFM	Distribution Feeder Main
DIST	Distribution
DR	Distribution Regulator
DREG	District Regulator
DSAW	Double Submerged Arc-Welded
ELE	Electric
ELEV	Elevation
EMS	Engineering Material Specification
ER	Edge of Road
ERW	Electric Resistance Welded
ETS	Electrolysis Test Station
F	Filter
FBE	Fusion Bonded Epoxy
FC	Face of Curb
FL	Fence Line
G	Natural Gas
GM	Natural Gas Main
GR	Grade
GS	Natural Gas Service
GS&S	Gas Standards and Specifications
GW	Natural Gas Well
HFW	High Frequency Welded
HPR	High Pressure Regulator
ILI	In-Line Inspection
L	Line Number
LAT	Latitude
LONG	Longitude
M	Monitor
MAOP	Maximum Allowable Operating Pressure
MLV	Main Line Valve
MP	Mile Point
MW	Working Monitor
NDE	Non-Destructive Examination
NPC	Non-Protected/Native Coupon
NTS	Not to Scale
OD	Outside Pipe Diameter
OH	Overhead
P	Pipeline
P/L	Property Line
PC	Protected/Polarized Coupon
PCF	Pressure Control Fitting
PL	Plastic
PSI	Pounds per Square Inch
REG	Regulator
ROW	Right of Way
SAWH	Submerged Arc-Welded Helical
SAWL	Submerged Arc-Welded Longitudinal
SD	Storm Drain
SHT	Sheet
SL	Sewer Lateral
SMLS	Seamless
SMYS	Specified Minimum Yield Strength
SS	Sanitary Sewer
SSAW	Single Submerged Arc-Welded
STD	Standard
TD	Technical Document
TCE	Temporary Construction Easement
TCP	Traffic Control Plan
TYP	Typical
UG	Underground
USA	Underground Service Alert
UT	Ultra-Sonic Test
V	Valve
VIF	Verify in Field
W	Water
WT	Wall Thickness
W/	With
W/O	Without
WP	Work Procedure
WS	Water Service

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SUPV
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OK
DATE 8/2/2023
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L-137B
ECDA EXCAVATION DIG
ARCATA, CALIFORNIA

84021985 | JOB # 23056807 | SHEET 3 OF 3 | C REV

Exhibit 3
1-23-0808 (Pacific Gas & Electric Company)
Project Plans (pg. 3 of 3)

Environmental Management |
Gas Transmission
5555 Florin-Perkins Road
Sacramento, CA 95826-4815

January 24, 2024

California Coastal Commission
1385 8th Street, Suite 130
Arcata, CA 95521

Subject: Pending Coastal Development Permit Application for PG&E's Gas Transmission Pipeline L-137B, External Corrosion Direct Assessment (ECDA) Investigation Dig D-1537 (EC20-137) Project, Arcata

In response to the California Coastal Commission's request for a Best Management Practice (BMP) narrative list, Pacific Gas and Electric Company (PG&E) anticipates the following BMPs may be used on the ECDA Investigation Dig D-1537 (EC20-137) Project:

TRACKING OF MUD AND DIRT ONTO PUBLIC ROADWAYS MUST ALWAYS BE CONTROLLED AT CONSTRUCTION SITES. TRACKING CONTROL BMPs MAY INCLUDE **SWEEPING OF PAVED SURFACES (SE-7)** AND/OR **STABILIZED CONSTRUCTION ENTRANCE/EXITS (TC-1)**.

(EC-1) SCHEDULING. SEQUENCE CONSTRUCTION ACTIVITIES AND IMPLEMENTATION OF EROSION AND SEDIMENT CONTROLS WITH CONSIDERATION OF LOCAL CLIMATE AND OTHER ENVIRONMENTAL FACTORS.

(EC-2) PRESERVATION OF EXISTING VEGETATION. PROTECT EXISTING VEGETATION FOR NATURAL EROSION PREVENTION AND SEDIMENT TRAPPING. CONDUCT WORK WITHIN DESIGNATED AREAS. DELINEATE WORK AREAS AND TRAFFIC ROUTES AS NEEDED.

(EC-7) GEOTEXTILES AND MATS. UTILIZE MATS TO REDUCE EROSION, STABILIZE SOIL, AND/OR RETAIN MOISTURE FOR PLANT GROWTH. AS NEEDED, COVER EXPOSED SOIL PRIOR TO RAIN EVENTS. INSTALL OVER PREPARED SURFACE PER MANUFACTURER'S RECOMMENDATIONS.

(SE-1) SILT FENCE. INSTALL ON LEVEL CONTOURS AS A SEDIMENT BARRIER FOR SHEET FLOW.

(SE-5) BIODEGRADABLE FIBER ROLL. INSTALL ON LEVEL CONTOURS TO INTERCEPT RUNOFF, REDUCE VELOCITY, AND CONTROL EROSION. FIBER ROLL SHOULD BE 100% BIODEGRADEABLE.

(SE-10) STORM DRAIN INLET PROTECTION. INTERCEPT RUNOFF TO CONTROL SEDIMENT. DRAIN INLETS WITHIN 200 FEET DOWNGRADIENT OF CONSTRUCTION ACTIVITIES SHALL BE PROTECTED.

Exhibit 4
1-23-0808 (Pacific Gas & Electric Company)
Proposed Best Management Practices (pg. 1 of 2)

(SE-12) MANUFACTURED LINEAR SEDIMENT CONTROL (MLSC). MLSCs ARE USED AS A SUBSTITUTE FOR FIBER ROLL (E.G., FILTER SOCK) OR SILT FENCE SEDIMENT CONTROL APPLICATIONS. USES INCLUDE PERIMETER CONTROL, LINEAR SEDIMENT CONTROL, CHECK DAMS, RUN-ON DIVERSION, AND DRAIN INLET PROTECTION.

(WM-1) MATERIAL DELIVERY AND STORAGE. DESIGNATE AREAS FOR MATERIAL DELIVERY AND STORAGE. TEMPORARY STORAGE SHOULD BE LOCATED NEAR THE CONSTRUCTION ENTRANCE AND AWAY FROM WATERWAYS. AVOID TRANSPORT NEAR DRAINAGE PATHS.

(WM-3) STOCKPILE MANAGEMENT. STOCKPILES WILL BE COVERED AND BERMED PRIOR TO QUALIFYING PRECIPITATION EVENTS (QPE) AND DURING RAIN EVENTS. STOCKPILES ARE REQUIRED TO BE PROTECTED IMMEDIATELY IF THEY ARE NOT SCHEDULED TO BE USED WITHIN 14 DAYS (NON-ACTIVE). IF SITE CONDITIONS, SITE LOCATIONS, OR SITE CONFIGURATION CHANGE, MORE STRINGENT STOCKPILE COVER REQUIREMENTS MAY BE IMPOSED.

(WM-4) SPILL PREVENTION AND CONTROL. SPILL CLEANUP SUPPLIES MUST BE MAINTAINED ONSITE AT ALL TIMES. IF CLEANUP SUPPLIES ARE MAINTAINED ONLY IN VEHICLES, VEHICLES MUST BE ONSITE AT ALL TIMES.

(WM-5) SOLID WASTE MANAGEMENT. MAKE SURE THAT CONSTRUCTION WASTE IS STORED ONLY IN AREAS AND RECEPTACLES DESIGNATED FOR TEMPORARILY STORING THESE WASTES.

(WM-9) SANITARY/SEPTIC WASTE MANAGEMENT. PORTABLE TOILETS SHALL BE EQUIPPED WITH CONTAINMENT AND SECURED TO PREVENT TIPPING. FACILITIES SHOULD BE STAGED AT LEAST 50 FEET FROM WATERCOURSES AND TRAFFIC CIRCULATION.

(WM-10) LIQUID WASTE MANAGEMENT. PREVENT THE DISCHARGE OF POLLUTANTS TO THE STORM DRAIN SYSTEM OR TO WATERCOURSES AS A RESULT OF THE CREATION AND COLLECTION OF NON-HAZARDOUS LIQUID WASTES. WASHOUT LOCATIONS, IF UTILIZED, MUST BE SECURED, WITHIN CONTAINMENT, AND COVERED PRIOR TO RAIN EVENTS.

If you have any questions regarding this matter, please do not hesitate to contact me at (916) 661-2270 at your convenience.

Sincerely,

Kalen Z Bjurstrom

Kalen Bjurstrom
Storm Water Work Supervisor
Pacific Gas and Electric Company
5555 Florin-Perkins Road, Sacramento, CA 95826-4815

Exhibit 4
1-23-0808 (Pacific Gas & Electric Company)
Proposed Best Management Practices (pg. 2 of 2)

Attachment 1
Transmission Bio Memo

Project Name: D-1537 L-137B MP 6.448 ECDA Dig Project	**PG&E Order #:** 74002509
Contract Biologist: Brian Boyd (Jacobs)- Biologist	**PG&E Biologist:** Abdullah Arakozie, PG&E Senior Terrestrial Biologist
Project Location: City of Arcata, Humboldt County, California	**Date Prepared**: 09/10/2023

Survey Description

The goal of the survey was to identify any biological constraints within the biological study area (BSA) and locate, map, and evaluate sensitive biological resources that might be adversely affected by the proposed project. Focused portions of the survey included potentially jurisdictional features that occur within the BSA, any burrows that might be along the access roads and within the BSA, and the presence of special-status species.

The BSA is a 100-foot buffer around the proposed project limits, proposed access routes dewatering infrastructure, sniff holes, and workspace locations EC20-137B-C and EC20-137B-D for Pacific Gas & Electric Company's (PG&E) D-1537 L-137B MP 6.448 ECDA Dig Project (project) in the City of Arcata, Humboldt County, California.

Field Visit Performed?

Jacobs biologist Brian Boyd conducted a biological constraints survey on August 1, 2023, between 9 and 11:00 am. The weather at the time was overcast to partly cloudy and the temperature ranged from 60 to 65°F during the survey of the BSA.

Project Description

The proposed project includes excavation of two (2) 12' long x 10' wide x 10' deep bell holes to assess PG&E's pipeline and casing. PG&E intends to trim the casing 3' in both bell holes (EC20-137-C and EC20-137-D) and to fill the casing annular space with a hardening gel to remove any possible electrolytic contact points leading to corrosion of the active 8" transmission line. The project requires excavation, shoring, dewatering, pipeline coating assessments, inspections, repairs, pipeline coating, installation of a CTS/ETS and casing vents, backfilling and site restoration, and may also include the plan of excavating two (2) sniff holes (6' long x 6' wide x 10' deep) to accommodate that replacement.

The project site is located at the southern end of the City of Arcata (within the Arcata Marsh and Wildlife Sanctuary) near the junction of U.S. Highway 101 and South G Street (Attachment 1: Figure 1). The site is located in Humboldt County on the Arcata South 7.5-minute U.S. Geological Survey (USGS) topographic quadrangles. The study area is geographically situated at the north end of Humboldt Bay, immediately west of Butchers Slough (Jolly Giant Creek estuary). As described in the Ecological Subregions of California (USDA 1997), the study area lies within the Humboldt Bay Flats and Terraces Subregion of the California Floristic Province (Baldwin et al. 2012). The site is bound by industrial development to the immediate south and east, and marine and estuarine open space to the immediate north and west (Appendix A). The site topography is level ranging from 3 to 5 feet above sea level and is used for industrial developments and open space. Vegetation in the area is characterized primarily by

non-native grasses and vines in the uplands, with tidally influence creek channels and brackish and freshwater marsh vegetation.

Land Ownership

Land ownership at the project includes the City of Arcata. The majority of the project is within the Arcata Marsh and Wildlife Refuge. Site access and project staging are proposed along South G Street and immediately adjacent to the Arcata Wastewater Treatment Facility.

Access

The site is accessed via US-101 in Arcata, CA. From US-101 take CA-255 S/Samoa Blvd toward Arcata and follow Samoa Blvd for 0.5 mile and turn left onto South G Street. Follow South G Street for 0.7 mile.

The entrance to the project area can be accessed by the city bike trail. The proposed access routes, and equipment staging will be along South G Street or via City bike trails or pedestrian pathways.

Summary of Desktop Review

Prior to initiating the biological constraints survey, a query of potential special-status species was generated from the California Department of Fish and Wildlife California Natural Diversity Database (CNDDB) and U.S. Department of Fish and Wildlife Information for Planning and Consultation (IPaC) resources. A standard 1.5-mile CNDDB and IPaC query was generated for the project site and vicinity (i.e., query of the USGS 7.5-minute topographic quadrangle in which the project site is found).

CNDDB contains records for special-status species which have been reported to the CDFW. Each of the species identified in these queries were then evaluated in terms of their likelihood of occurrence within and immediately adjacent to the project site. Figures 2 and 2B (Attachment 1) depict CNDDB occurrences within a 1.5-mile search radius of the BSA.

Based on a desktop review of PG&E GIS layers, Multi-Region Habitat Conservation Plan (MRHCP) modeled habitat for Foothill Yellow-Legged Frog (FYLF) and Northern Spotted Owl (NSO) is located within the BSA. No USFWS critical habitat is present within the BSA or 1.5-mile search radius of the BSA.

Field Review

Observations within the BSA (Figure 2) consisted of wetland habitats and a mixture of ruderal or non-native grass / shrub habitat. Site access and staging along South G Street in Arcata, CA, is upland shrub and forested wetland habitat to the west, and private industrial lands to the east. Site access, staging, and work areas in the south and west portions of the BSA are bordered by wetland habitat and the Arcata Wastewater Treatment Plant.

Photograph 1. Tanks and filtration staging area along South G Street, adjacent to the Arcata Marsh and Wildlife Refuge. Ruderal upland vegetation is present in the photograph. Photograph taken facing northwest (Coordinates: 40.857064°, -124.089631°).

Photograph 2. Obligate wetland habitat observed immediately adjacent to the sniff hole location along South G Street at the Arcata Water Treatment Facility entrance. Photograph taken facing north (Coordinates 40.855686°, -124.089347°).

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Photograph 3. Workspace 137B – C/D access route from the Arcata Water Treatment Facility entrance. Ruderal upland vegetation is present in the right of photograph along the historic railroad grade. Photograph taken facing northwest. (Coordinates: 40.855635°, - 124.089420°).

Photograph 4. Workspace 137B – C/D access route at Arcata Water Treatment Facility. A mix of native and ruderal upland vegetation is present in the left of photograph along the historic railroad grade. Photograph taken facing southeast (Coordinates: 40.856188°, -124.090169°).

Photograph 5. View of Workspace 137B – D from the access route. Emergent wetland habitat is observed within the work location. Photograph taken facing southeast (Coordinates: 40.856256°, -124.090372°).

Photograph 6. Photograph taken along access / dewatering route at workspace 137B – C/D. A mix of native and ruderal upland vegetation is present in the right of photograph, and willow thicket is present in the rear of the photograph. Saltmarsh wetlands borders this site to the north and west. Photograph facing northeast (Coordinates: 40.856330°, -124.090274°).

Photograph 7. Photograph taken along access / dewatering route at the western edge of workspace 137B – C at the historic railroad grade. A mix of native and ruderal upland vegetation is present in foreground. This site is surrounded by wetland habitat. Photograph facing southeast (Coordinates: 40.856330°, -124.090274°).

Photograph 8. Photograph taken along access / dewatering route at the western edge of workspace 137B – C at the historic railroad grade. A mix of native and ruderal upland vegetation is present in foreground. This site is surrounded by wetland habitat. Photograph facing southeast (Coordinates: 40.856503°, - 124.090180°).

Photograph 9. Photograph taken at edge of Butcher's Slough facing workspace 137B – C along historic railroad grade. A mix of native and ruderal upland vegetation is present foreground, with wetland vegetation established at the edge of the slough. The tide gate on the left allows water into the saltmarsh and obligate wetlands along the north and east sides of workspace 137B – C. Photograph facing east (Coordinates: 40.856576°, - 124.090342°).

Photograph 10. Photograph taken at Butcher's Slough immediately west of workspace 137B – C. Photograph facing north (Coordinates: 40.856576°, - 124.090342°).

Land Use

Land use within the BSA consists of a mixture of agricultural, public, and private property, and recreational use.

Habitat Types

As described in the Ecological Subregions of California (USDA 1997), the study area lies within the Humboldt Bay Flats and Terraces Subregion of the California Floristic Province (Baldwin et al. 2012). The site is bound by industrial development to the immediate south and east, and marine and estuarine open space to the immediate north and west (Appendix A). The site topography is level ranging from 3 to 5 feet above sea level and is used for industrial developments and open space. Vegetation in the area is characterized primarily by non-native grasses and vines in the uplands, with tidally influenced creek channels and brackish and freshwater marsh vegetation.

Land cover type in the study area is California Coastal Steppe. Habitat types observed in the study area include freshwater emergent wetland, riverine wetland, saltwater marsh, forested wetland, and urban /industrial lands. Each habitat type observed is discussed in further detail below.

Freshwater emergent habitat is present in the south portion of the study area. It is dominated by coyote brush (*Baccharis pilularis*), red fescue (*Festuca rubra*), spear saltbush (*Atriplex patula*), Himalayan blackberry (*Rubus armeniacus*), Pacific blackberry (*Rubus ursinus*), broadleaf cattail (*Typha latifolia*), water parsley (*Oenanthe sarmentosa*), and cinquefoil (*Potentilla anserine pacifica*). Other species present in this habitat include salt grass (*Distichlis spicata*), dense-flowered cordgrass (*Spartina densiflora*), Twinberry (*Lonicera involucrata*), common rush (*Juncus effusus*), curly dock (*Rumex crispus*), Queen Anne's lace (*Daucus carota*), orchardgrass (*Dactylis glomerata*), and sweet vernal grass (*Anthoxanthum odoratum*).

Riverine wetland habitat is present in the southeast portion of the study area. This channel feature is influenced by freshwater runoff from the pasturelands to the east, as well as the tides within the saltwater marsh to the west. Water was flowing northwest into Butcher Slough at the time of the site visit. Dominant vegetation observed at the site include seaside arrow-grass (*Triglochin maritimum*) and common rush (*Juncus effusus*). Other species present in this habitat include beard grass (*Polypogon monspeliensis*), hairy cat's ear (*Hypochaeris radicata*), white clover (*Trifolium repens*), English plantain (*Plantago lanceolata*), Slender pickleweed (*Salicornia pacifica*), and sweet vernal grass.

Saltwater marsh wetland is present in the west and central portion of the study area and connects to the riverine habitat described earlier. This habitat is directly influenced by the tidal action on Humboldt Bay. Although much of this area is dominated by mud flat, vegetation observed at the site include seaside arrow-grass, Dense-flowered cordgrass, marsh jaumea (*Jaumea carnosa*), Humboldt Bay owl's clover (*Castilleja ambigua* ssp*. humboldtiensis)*, slender pickleweed, and spear saltbush.

The forested wetland habitat is located in the north portion of the study area. This habitat is dominated by broad-leaved deciduous trees and shrubs and is seasonally flooded. Dominant vegetation in this habitat consists of arroyo willow (*Salix lasiolepis*), Pacific blackberry, stickywilly (*Galium aparine*), and sweet vernal grass. Other species present in this habitat include velvet grass (*Holcus lanatus*), soft brome (*Bromus hordeaceus*), sword fern (*Polystichum munitum*), annual bluegrass (*Poa annua*).

Industrial areas are present at the northern, eastern, and southern ends of the study areas and include paved areas and developed structures. Dominant vegetation observed in these areas include coyote

brush, Himalayan blackberry, English plantain, sweet vernal grass, hairy cat's ear, wild radish (*Raphanus sativus*), common teasel (*Dipsacus fullonum*), and slender oat (*Avena barbata*).

Nesting Birds

Suitable nesting habitat for one or more species of birds protected under the federal Migratory Bird Treaty Act the project site was observed throughout the BSA.

Aquatic Resources

The NWI Wetlands Mapper (USFWS 2023) identified five wetland types within the BSA (Attachment 1: Figure 3). These include Palustrine, Emergent, Persistent, Seasonally Flooded wetlands (PEM1C), Riverine, Upper Perennial, Unconsolidated Bottom, Semipermanently Flooded channel wetlands (R3UBF), Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded wetlands (PSS1C), Estuarine, Intertidal, Unconsolidated Shore, Mud, Regularly Exposed wetlands (E2US3N), and Estuarine, Intertidal, Emergent, Persistent, Regularly Exposed wetlands (E2EM1N).

Potentially jurisdictional aquatic resources were observed within the BSA and include a freshwater channel along the southeast edge of the BSA, obligate and saltmarsh wetlands between workspaces 137B – C / D and South G Street, a forested wetland north of workspaces 137B – C / D, a small emergent wetland south of workspace 137B – C /D, and Butcher's Slough along the western boundary of the BSA.

Safety Observations

Homeless encampment, high traffic, public recreation area.

Species Potential for Occurrence within the Work Area

Species/ Common Name		Absent	Unlikely to Occur	Seasonally present	Potential to occur	Likely to occur	Present*
Foothill yellow-legged frog - north coast DPS *(Rana boylii* pop. 1); SSC						X	
Northern red-legged frog (*Rana aurora*); SSC						X	
Southern torrent salamander (*Rhyacotriton variegatus*); SSC			X				
western pond turtle (Emys *marmorata*); SSC					X		
Marbled Murrelet (*Brachyramphus marmoratus*); FT, SE					X		

Northern Spotted Owl (*Strix occidentalis caurina*); FT, ST			X				
Western Snowy Plover (*Charadrius nivosus nivosus*); FT, SSC			X				
Yellow-billd Cuckoo (*Coccyzus americanus*); FT, SE			X				
American peregrine falcon (*Falco peregrinus anatum*); Delisted, SFP					X		
mountain plover (*Charadrius montanus*); SSC				X			
California Ridgway's rail (*Rallus obsoletus obsoletus*); FE, SE					X		
Bank Swallow (*Riparia riparia*); ST			X				
Longfin smelt (*Spirinchus thaleichthys*); ST		X					
Pacific lamprey (Entosphenus tridentatus); SSC		X					
steelhead - northern California DPS winter-run (*Oncorhynchus mykiss irideus pop. 49*); FT		X					
tidewater goby (*Eucyclogobius newberryi*); FE		X					
coho salmon - southern Oregon / northern California ESU (*Oncorhynchus kisutch pop. 2*); FT, ST		X					
eulachon (*Thaleichthys pacificus*); FT		X					
green sturgeon - southern DPS (*Acipenser medirostris* pop. 1); FT		X					
coast cutthroat trout (*Oncorhynchus clarkii clarkii*); SSC		X					
western bumble bee (*Bombus occidentalis*); SC					X		
Monarch Butterfly (Danaus plexippus); FC					X		
Sonoma tree vole (*Arborimus pomo*); SSC		X					
Salt marsh harvest mouse (Reithrodontomys raviventris); FE, SE		X					
Humboldt Marten (*Martes caurina humboldtensis*)		X					

Western lily (*Lilium occidentale*); FE, SE, 1B.1					X		
Lyngbye's sedge (Carex lyngbyei); 2B.2					X		
Humboldt Bay owl's-clover (*Castilleja ambigua var. humboldtiensis*)1B.2					X		
Howell's montia (*Montia howellii*); 2B.2					X		
Point Reyes salty bird's-beak (*Chloropyron maritimum ssp. palustre*)1B.2					X		
minute pocket moss (*Fissidens pauperculus*);1B.2			X				
Notes		• **foothill yellow-legged frog - north coast DPS (SSC):** The foothill yellow-legged frog lives in foothill and mountain streams from the Pacific Coast to the western slopes of the Sierra Nevada and Cascades mountains, up to approximately 5,000 feet in elevation. The foothill yellow-legged frog occurs in a wide variety of vegetation types including valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, mixed chaparral, and wet meadows. The frog is strongly associated with streams and is rarely observed far from the water's edge. Breeding stream habitat is typically shallow, rocky, and at least partially exposed to direct sunlight. MRHCP modelled habitat is present within the project BSA. The most recent CNDDB observation record (2007) is in streams that flow through wet meadow habitat along the foothills east of the project. Suitable habitat for this species may be present within and immediately adjacent to the BSA and therefore this species is likely to occur within the project work area. • **northern red-legged frog (SSC):** Northern red-legged frog habitat includes streams, marshes, ponds, and other quiet bodies of water. This species regularly occurs in damp woods and meadows some distance from water, especially during wet weather. Individuals (especially juveniles) seasonally can be found in and near ephemeral pools. Breeding sites most often are in permanent water. The most recent CNDDB observation (2017) is located within the treatment plant facility immediate south of the project BSA. Additional CNDDB observations within the Arcata Marsh and Wildlife Sanctuary occurred in 2011. Suitable habitat for this species is present within and immediately adjacent to the project BSA. This species is likely to occur within the project work area. • **southern torrent salamander (SCC):** This species occurs in coastal coniferous forests in California and Oregon. Older forests are more likely to maintain a population of southern torrent salamanders. The most recent CNDDB observations (1994) is located within						

		redwood forest habitat east of the project BSA. Suitable habitat is not present within or immediately adjacent to the Project BSA. This species is not likely to occur within the project work area. • **Marbled Murrelet (FT, SE):** The marbled murrelet spends the majority of its time on the ocean, resting and feeding in near-shore marine waters and coming inland to nest. Marine foraging areas are usually within 1 to 3 miles offshore, typically in waters less than 100 feet deep. They spend the vast majority of the non-breeding season on the ocean. Certain habitat may be present within or immediately adjacent to the project BSA. This species has some potential to occur within the project work area. • **Northern Spotted Owl (FT, ST):** The northern spotted owl primarily inhabits old growth forests in the northern part of its range (extreme southwestern Canada to southern Oregon) and landscapes with a mix of old and younger forest types in the southern part of its range (Klamath region and California). The subspecies' range is the Pacific coast from extreme southern British Columbia to Marin County in northern California. The northern spotted owl nests in cavities or on platforms in large trees. MRHCP spotted owl modelled habitat is present within the BSA and in the redwood forest east of the BSA; A single undated negative observation was noted in the redwood forest approximately 1.5 miles east of project. Although MRHCP modelled habitat is present within the BSA, primary habitat for this species is not present within or immediately adjacent to the BSA. This species is unlikely to occur within the project work area. • **Western Snowy Plover (FT, SSC):** Habitat Requirements for the Western snowy plover include barren to sparsely vegetated sand beaches, dry salt flats in lagoons, dredge spoils deposited on beach or dune habitat, levees and flats at salt-evaporation ponds, river bars, along alkaline or saline lakes, reservoirs, and ponds. Habitat for this species is not present within or immediately adjacent to the BSA. This species is unlikely to occur within the project work area. • **Yellow-billed Cuckoo (FT, SE):** The yellow-billed Cuckoos utilizes wooded habitat with dense cover and water nearby. Such habitat includes woodlands with low, scrubby, vegetation, overgrown orchards, abandoned farmland, and dense thickets along streams and marshes. In the West, nests are often placed in willows along streams and rivers, with nearby cottonwoods serving as foraging sites. Habitat for this species is not present within or immediately adjacent to the BSA. This species is unlikely to occur within the project work area. • **American peregrine falcon (delisted, SFP):** The peregrine falcon lives mostly along mountain ranges, river valleys, and coastlines. In mild-winter regions it is usually a permanent resident, and some individuals, especially adult males, will remain on the breeding

territory. The peregrine falcon's diet varies greatly and is adapted to available prey in different regions. However, it feeds exclusively on medium-sized birds such as pigeons and doves, waterfowl, gamebirds, songbirds, seabirds, and waders. The project CNDDB observations (undated) occurred within redwood forest habitat east of the project BSA. Potential foraging habitat is present within and immediately adjacent to the project BSA, and therefore this species has potential to occur within the project work area.

- **mountain plover (SSC):** The mountain plover breeds in the high plains of North America from extreme southeastern Alberta and southwestern Saskatchewan to northern New Mexico and the Texas panhandle. About 85 percent of the population winters in the San Joaquin and Imperial Valleys of California. The mountain plovers winter range extends along the U.S.-Mexican border, more extensively on the Mexican side. The most recent CNDDB observations (2012) occurred within Arcata Bottoms and Arcata Marsh and Wildlife Sanctuary. CNDDB notes indicate this species may utilize habitat in vicinity of BSA for overwintering. There is potential for the species to be seasonally present within the project work area.
- **California Ridgway's rail (FE, SE):** Although historically known from Francisco Bay to Humboldt Bay (Humboldt County), Morro Bay (San Luis Obispo County), and Elkhorn Slough (Monterey County), California, California Ridgway's rail is now restricted to San Francisco Bay ecosystems. During the spring breeding season smaller numbers occur in Suisun Bay marshes, Napa Marsh, and the southern end of South San Francisco Bay. About 90% of the population occurs in the south bay region.
  The California Ridgway's rail habitat is specific to herbaceous estuarine wetland which include pickleweed (*Salicornia*) and cordgrass (*Spartina foliosa*) marshes. This species nests in marshlands (cordgrass, pickleweed, gum-plant, salt grass) near tidal ponds, arranging plants or drift material over the nest as a canopy, often constructing brood nest on higher ground to shelter young from storm tides.
  Preferred habitat for the California Ridgway's rail is present within the Arcata Marsh and Wildlife Sanctuary immediately adjacent to and within the Project BSA. There is potential for the species to occur within the project work area.
- **Bank Swallow (ST):** Habitat for the bank swallow includes open and partly open situations, frequently near flowing water. Nests are in steep sand, dirt, or gravel banks, in burrows dug near the top of the bank, along the edge of inland water, or along the coast, or in gravel pits, road embankments, etc. During the northern winter, the range in the Americas is

from eastern Panama southward, east of the Andes, to northern Argentina, Paraguay, and northern Chile, casually north to Southern California. Suitable habitat is lacking for this species within the project BSA and therefore this species is unlikely to occur within the project work area.

- **longfin smelt (ST):** This species can be found in several estuaries and lakes along the northern Pacific coast of North America. The most recent CNDDB observation (2005) is located in a non-specific location of Humboldt Bay. Although this species has some potential to occur within the project BSA, the project work area is situated within terrestrial habitat, and therefore this species is considered Absent and will not be affected by the project.
- **Pacific lamprey (SSC):** An anadromous parasitic lamprey from the Pacific Coast of North America and Asia. The most recent CNDDB observation (2011) is located near the mouth of Jacoby Creek at Humboldt Bay. Certain habitat may present within or immediately adjacent to the project BSA. Although this species has some potential to occur within the project BSA, the project work area is situated within terrestrial habitat, and therefore this species is considered Absent and will not be affected by the project.
- **steelhead - northern California DPS winter-run (FT):** After living two to three years in the ocean, steelhead usually return to small freshwater coastal streams, as well as larger rivers, to spawn. The most recent CNDDB observation record for this area (2008) is located within Jacoby Creek and its tributaries, southeast of Arcata, CA. Although this species has some potential to occur within the project BSA, the project work area is situated within terrestrial habitat, and therefore this species is considered Absent and will not be affected by the project.
- **tidewater goby (FE):** Tidewater gobies are small fish found in brackish water lagoons, estuaries, and marshes along the California coast. These habitats are fresh or brackish water, with a varying mixture of fresh and saltwater, much of the year. When their habitat experiences an influx of salt water, juvenile and adult tidewater gobies often congregate where freshwater enters the lagoon or estuary. The most recent CNDDB record (2010) indicates that multiple adults and larvae were observed in McDaniel Slough, immediately west of project BSA. Although this species has some potential to occur within the project BSA, the project work area is situated within terrestrial habitat, and therefore this species is considered Absent and will not be affected by the project.
- **coho salmon - southern Oregon / northern California ESU (FT, ST):** California Coho Salmon typically inhabit small coastal streams, as well as larger rivers. Coho Salmon in northern California coastal streams are

		typically associated with low gradient reaches which provide suitable spawning areas and good juvenile rearing habitat. The most recent CNDDB record (2008) indicates that this species is present within Jacoby Creek, a coastal stream immediately east of Arcata Bay. Although this species has some potential to occur within the project BSA, the project work area is situated within terrestrial habitat, and therefore this species is considered Absent and will not be affected by the project. • **Eulachon (FT):** Eulachon can typically be found within estuarine habitats such as river mouths and bays, as well as low to moderate gradient creeks. This species spawns in coastal freshwater streams over bottoms of silt, sand, gravel, cobble, or detritus. The most recent CNDDB record for this area (1996) indicates that this species has been observed in Humboldt Bay, Jacoby Creek, Jolly Giant Creek, and Butchers Slough (immediately adjacent to the project BSA). Although this species has some potential to occur within the project BSA, the project work area is situated within terrestrial habitat and therefore this species is considered Absent and will not be affected by the project. • **green sturgeon – southern DPS (FT):** The green sturgeon is comprised of two Distinct Population Segments (DPS), the federally threatened southern DPS (sDPS) that spawn in the Sacramento, Feather, and Yuba Rivers of California, and the northern Distinct Population Segment (nDPS) which spawn in the Klamath, Trinity, South Fork Trinity, and Eel Rivers (California) and the Rogue River (Oregon). Members of this DPS spend most of their life cycle in coastal marine waters, estuaries, and the lower reaches of large rivers. The most recent CNDDB observation (2020) is located in a non-specific portion of Humboldt Bay. Collections of this species have occurred throughout the southern and northern portions of Humboldt Bay, including Arcata Bay located immediately south of the project BSA. CNDDB notes indicate that Humboldt Bay may be critical habitat for this species. Although this species has some potential to occur within the project BSA, the project work area is situated within terrestrial habitat and therefore this species is considered Absent and will not be affected by the project. • **coast cutthroat trout (SSC):** The native range of the coastal cutthroat trout extends south from the southern coastline of the Kenai Peninsula in Alaska to the Eel River in Northern California. Coastal cutthroat trout are resident in tributary streams and rivers of the Pacific basin and are rarely found more than 100 miles from the ocean. The vast majority of coastal cutthroat trout habitat coincides with the belt of Pacific coast coniferous rainforest that extends from Alaska southward into Northern California. Coastal cutthroat trout use a large variety of habitat types, including lower and upper

		reaches of both large and small river systems, estuaries, sloughs, ponds, lakes, and near shore ocean waters. Semi-anadromous coastal cutthroat trout spend short periods offshore during summer months and return to estuaries and fresh water by fall or winter. Although this species has some potential to occur within the project BSA, the project work area is situated within terrestrial habitat and therefore this species is considered Absent and will not be affected by the project. • **western bumble bee (SC):** The western bumble bee can be found in a range of habitats, including mixed woodlands, farmlands, urban areas, montane meadows, and into the western edge of the prairie grasslands. The most recent CNDDB record for this area was in 1976 and indicates that the species was observed in the general vicinity if the City of Arcata. Certain habitat may present within or immediately adjacent to the BSA. This species has some potential to occur within the project work area. • **Monarch Butterfly (FC):** The monarch butterfly utilizes many terrestrial habitats including grasslands, shrubland, sand dunes, woodlands (hardwood, coniferous, mixed), open fields, orchards, and hedgerow cropland. Certain habitat may present within or immediately adjacent to the BSA. This species has some potential to occur within the project work area. • **Sonoma tree vole (SSC):** The Sonoma tree vole is found in northwest California. The preferred habitat for this primarily arboreal vole is old-growth Douglas-fir forests. Habitat consists of mixed evergreen forests; optimum habitat is wet and mesic old growth Douglas-fir forest. This vole is primarily arboreal but exhibits some terrestrial activity. The most recent CNDDB record (1981) indicates observations within the redwood forest immediately east of the City of Arcata. No habitat is present within the BSA for this species. This species is considered absent from the project work area. • **Salt-marsh Harvest Mouse (FE, SE):** This species habitat consists of salt and brackish marshes, where plants provide a dense mat of cover, ideally around 30-50 cm high with a high percentage (e.g., 60%) of *Salicornia* (pickleweed) and complex structure of *Atriplex* and other species. The mouse needs access to refuge/cover on high ground, especially during highest tides in winter. Range of the salt-marsh harvest mouse encompasses salt marshes of the San Francisco Bay system (San Francisco, San Pablo, and Suisun bays), in central California, marshes of San Pablo and Suisun bays (and including Petaluma Marsh in Sonoma County) and along the northern Contra Costa County coast (east to Antioch dunes area), and in southern part of South San Francisco Bay, with a few populations on the Marin Peninsula (west to mouth of Gallinas Creek) and near Point Richmond. Humboldt Bay is outside this species

range of occurrence and therefore this species is considered absent from the project work area.

- **Pacific (Humboldt) Marten (FT):** This species usually occurs in dense deciduous, mixed, or coniferous upland and lowland forest, and rocky alpine areas. When inactive, martens occupy holes in dead or live trees or stumps, abandoned squirrel nests, conifer crowns, rock piles, burrows, snow cavities, etc. Habitat is not present within or immediately adjacent to the project BSA. This species is considered absent from the project work area.
- **Western lily (FE, SE, 1B.1):** The Western lily is a perennial plant that grows from a bulb and occurs in coastal areas between Coos Bay, Oregon, and Humboldt Bay, California. Habitat includes Pacific coastal wetlands, wet sphagnum bogs, and forest or thicket openings along the margins of ephemeral ponds and small streams. This species can also be found in coastal scrub and prairie, and other poorly drained soils near the ocean where fog is common. The most recent CNDDB observation (2017) is in Sitka spruce / shore pine habitat with <50% canopy at a non-specific location of Humboldt Bay. Certain habitat may present within or immediately adjacent to the project BSA. This species has some potential to occur within the project work area.
- **Lyngbye's sedge (2B.2):** Native to the west coast of North America from Alaska to California, Lyngbye's sedge is a common sedge of Pacific coastal salt marshes. It prefers to grow in silty sediment and in habitat with brackish water, such as salt marshes. CNDDB observations from 1996 to 2001indicate this species is present along the north and east sides of Humboldt Bay, from McDaniel Slough to south of the Arcata Marsh and Wildlife Sanctuary. There is potential for the species to occur within the project work area.
- **Humboldt Bay owl's-clover (1B.2):** This species tends to occur coastal saltmarsh and riparian wetlands. The most recent CNDDB observation (1987) occurred along northeast side of Humboldt Bay, from west of McDaniel Slough to south of the Arcata Marsh and Wildlife Sanctuary. There is potential for the species to occur within the project work area.
- **Howell's montia (2B.2):** This species can be found in meadows, North Coast coniferous forest, vernal pools, vernally mesic soils, moist lowland areas. The most recent CNDDB observation (2012) occurred within Arcata Bottoms. CNDDB notes indicate this species may utilize certain habitat in vicinity of project BSA, and therefore this species has potential to occur within the project work area.
- **Point Reyes salty bird's-beak (1B.2):** This species occurs in wetlands, riparian areas, and coastal saltmarsh. The most recent CNDDB observation (2002) occurred along Humboldt Bay and within the Arcata Marsh and Wildlife Sanctuary immediately adjacent to

		and within the project BSA. There is potential for the species to occur within the project work area. • **minute pocket moss (1B.2):** This species is often found on bare, moist soil banks, often growing alongside Fissidens bryoides, another species of moss that prefers soil in moist, shaded sites. The CNDDB records indicate this species was observed in the redwood forest east of the City of Arcata in 1995. Suitable habitat is lacking for this species within the project BSA and therefore this species is considered Absent from the project work area and will not be affected by the project. • **western pond turtle (SSC):** The western pond turtle occurs in both permanent and intermittent waters, including marshes, streams, rivers, ponds, and lakes. It favors habitats with large numbers of emergent logs or boulders, where individuals aggregate to bask. In addition to its aquatic habitat, terrestrial habitat is also extremely important for the western pond turtle. The CNDDB records indicate this species was observed in the redwood forest east of the City of Arcata in 1994. Suitable habitat for this species is present within the project BSA and therefore this species has some potential to occur within the project work area.

Definitions:

- **Present** - Reconnaissance-level, focused, or protocol-level surveys documented the occurrence or observation of a species in the Project footprint.
- **Seasonally present** - Individuals were observed in the Project footprint but are only present in the area during certain times of the year.
- **Likely to occur** (on site or offsite where the species may be affected by the Project from noise, dust, lighting, hydrological modifications, etc.) - The species has a strong likelihood to be found in the Project footprint prior to or during construction but has not been directly observed to date during Project surveys. The likelihood that a species may occur is based on the following considerations: suitable habitat that meets the life history requirements of the species is present on or near the Project footprint; migration routes or corridors are near or within the Project footprint; records of sighting are documented on or near the Project footprint; and there is an absence of invasive predators (for example, bullfrogs). The main assumption is that records of occurrence have been documented within or near the Project footprint, the Project footprint falls within the range of the species, suitable habitat is present, but it is undetermined whether the habitat is currently occupied.
- **Potential to occur** - There is a possibility that the species can be found in the Project footprint prior to or during construction but it has not been directly observed to date. The likelihood that a species may occur is based on the following conditions: suitable habitat that meets the life history requirements of the species is present on or near the Project footprint; migration routes or corridors are near or within the Project footprint; and there is an absence of invasive predators (for example, bullfrogs). The main assumption is that the Project footprint falls within the range of the species, suitable habitat is present, but no records of sighting are located within or near the Project footprint and it is undetermined whether the habitat is currently occupied.
- **Unlikely to occur** - The species is not likely to occur in the Project footprint based on the following considerations: lack of suitable habitat and features that are required to satisfy the life history requirements of the species (for example, absence of foraging habitat, lack of reproductive areas, and lack of sheltering areas); presence of barriers to migration/dispersal; presence of predators or invasive species that inhibit survival or occupation (for example, the presence of bullfrogs or invasive fish); lack of hibernacula, hibernation areas, or estivation areas on site.
- **Absent** - Suitable habitat does not exist in the Project footprint, the species is restricted to or known to be present only within a specific area outside of the Project footprint, or focused or protocol-level surveys did not detect the species.

Recommendations for Resource Impact Minimization

Below are PG&E's Multiregional Habitat Conservation Plan (HCP) Field Protocols (FP) developed and utilized to minimize impacts to natural resources and special-status species:

Field Protocol (FP) Mitigation Measure[1]	Description of Measure
FP-01	Conduct annual training on habitat conservation plan requirements for employees and contractors performing covered activities in the Plan Area that are applicable to their job duties and work. Tailboard and site-specific training will also be conducted prior to commencing work.
FP-02	Park vehicles and equipment on pavement, existing roads, or other disturbed or designated areas (barren, gravel, compacted dirt).
FP-04	Route off-road access paths and site work sites to minimize impacts on plants, shrubs, and trees, small mammal burrows, and unique natural features (e.g., rock outcrops).
FP-03	Use existing access and ROW roads. Minimize the development of new access and ROW roads, including clearing and blading for temporary vehicle access in areas of natural vegetation.
FP-06	Minimize potential for covered species to become trapped, injured, or killed in pipes, culverts, or under materials or equipment. Inspect pipes and culverts wide enough to be entered by a covered species that could inhabit the area where pipes are stored for wildlife species prior to moving pipes and culverts. Contact a biologist if a covered species or other federally listed species is suspected or discovered.
FP-07	Vehicle speeds on unpaved roads will not exceed 15 miles per hour.
FP-08	Prohibit trash dumping, firearms, open fires (such as barbecues), hunting, and pets (except for safety in remote locations) at work sites.
FP-09	In designated State Responsibility Areas, equip all motorized equipment with federally or state-approved spark arrestors. Ensure a backpack pump filled with water and a shovel and fire-resistant mats and/or windscreens is onsite during welding. During fire "red flag" conditions as determined by the California Department of Forestry and Fire Protection, prohibit welding. Each fuel truck will carry a large fire extinguisher with a minimum rating of 40 B:C. Clear parking and storage areas of all flammable materials.
FP-10	Minimize the covered activity footprint and minimize the amount of time spent at a work site to reduce the potential for take of species.
FP-11	Utilize standard erosion and sediment control BMPs (pursuant to the most current version of PG&E's Stormwater Field Manual for Construction Best Management Practices) to prevent construction site runoff into waterways.
FP-12	Stockpile soil within established work site boundaries and locate stockpiles so as not to enter water bodies, stormwater inlets, other standing bodies of water. Cover stockpiled soil prior to precipitation events.
FP-13	Fit open trenches or steep-walled holes with escape ramps of plywood boards or sloped earthen ramps at each end if left open overnight. Field crews will search open trenches or steep-walled holes every morning prior to initiating daily activities to ensure wildlife is not trapped. Field crews will not handle covered species. If any covered wildlife species is found, work will stop, and a biologist will be notified. A biologist with appropriate take permits will relocate the species to adjacent habitat or the species will be allowed to naturally disperse, as determined by a biologist.

FP-14	If the covered activity disturbs 0.1 acre or more of habitat for a covered species in grasslands, the field crew will revegetate the area with a commercial “weed free” seed mix. (Except in suitable habitat for Mount Hermon June beetle, Ohlone tiger beetle and Zayante band-winged grasshopper.)
FP-15	Prohibit vehicular and equipment refueling within 250 feet of the edge of wetlands, streams, or waterways. If refueling must be conducted closer to wetlands, construct a secondary containment area subject to review by an environmental field specialist and/or biologist. Maintain spill prevention and cleanup equipment in refueling areas.
FP-16	Maintain a buffer of 250 feet from the edge of wetlands, ponds, or riparian areas. If maintaining the buffer is not practicable because the covered activity footprint is within the buffered area, other measures as prescribed by the biologist or the HCP administrator to minimize impacts such as flagging access routes or paths, requiring foot access, restricting work until the dry season, or requiring a biological monitor during the activity.
FP-18	Nests with eggs and/or chicks will be avoided: contact a biologist or the Avian Protection Program Manager for further guidance. Work will be stopped until the crew can obtain clarification from a biologist or the Avian Protection Program Manager on how to proceed.
FP-19	Inspect and maintain exclusion fencing installed to exclude species from work areas.
Wetland- 2	Identify wetlands, ponds, and riparian areas and establish and maintain a buffer of 50 feet around wetlands, ponds, and riparian areas. If maintaining the buffer is not practicable because the work sites are within any part of the buffered area, the field crew will implement other measures as prescribed by the biologist to minimize habitat impacts. These measures may include flagging access, requiring foot access, restricting work until the dry season, or requiring a biological monitor during the activity. Activities must maintain the hydrology necessary to support the wetland, pond, or riparian area (inclusive of downstream).
[1]Pacific Gas & Electric Company. 2020. Multiple Region Operations & Maintenance Habitat Conservation Plan for Sacramento Valley and Foothills, Northern Coast, and Central Coast. May.	

References

Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors. 2012. The Jepson manual: vascular plants of California, second edition. University of California Press, Berkeley.

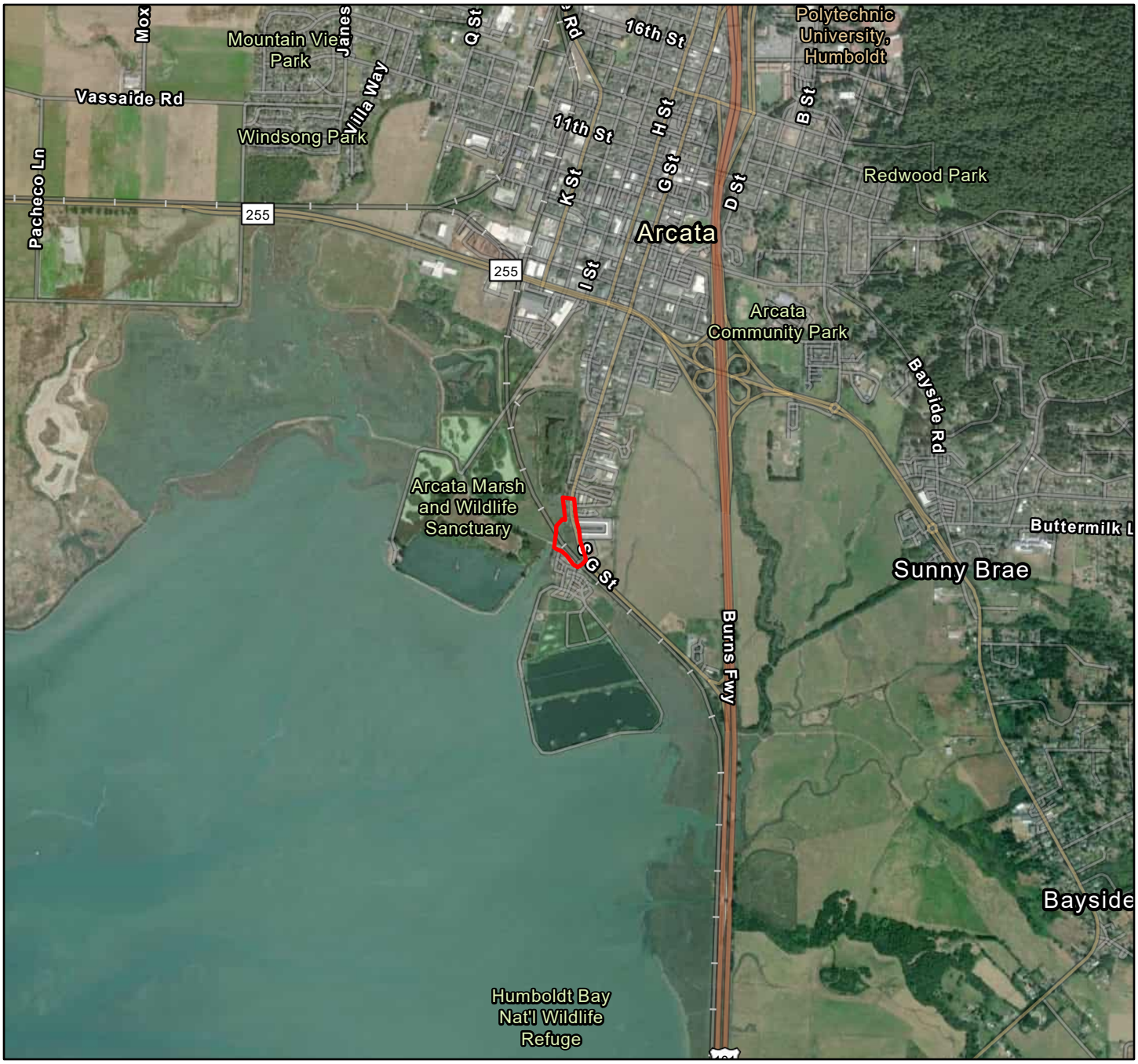
Pacific Gas & Electric Company. 2020. Multiple Region Operations & Maintenance Habitat Conservation Plan for Sacramento Valley and Foothills, Northern Coast, and Central Coast.

California Department of Fish and Wildlife (CDFW). 2023. California Natural Diversity Database (CNDDB). Arcata, California. Accessed September 5, 2023. https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data.

U.S. Department of Fish and Wildlife Information for Planning and Consultation (IPaC) 2023. September 5, 2022. https://www.rareplants.cnps.org.

U.S. Fish and Wildlife Service (USFWS). 2023. National Wetlands Inventory Wetland Mapper (web application), Available at http://www.fws.gov/wetlands/index.html.

U.S. Department of Agriculture. (USDA). 1997. Ecological Subregions of California, Section and Subsection Descriptions. USDA, Forest Service Pacific Southwest Region. R5-EM-TP-005. September.



Legend

Study Area (100 ft Buffer)

VICINITY MAP

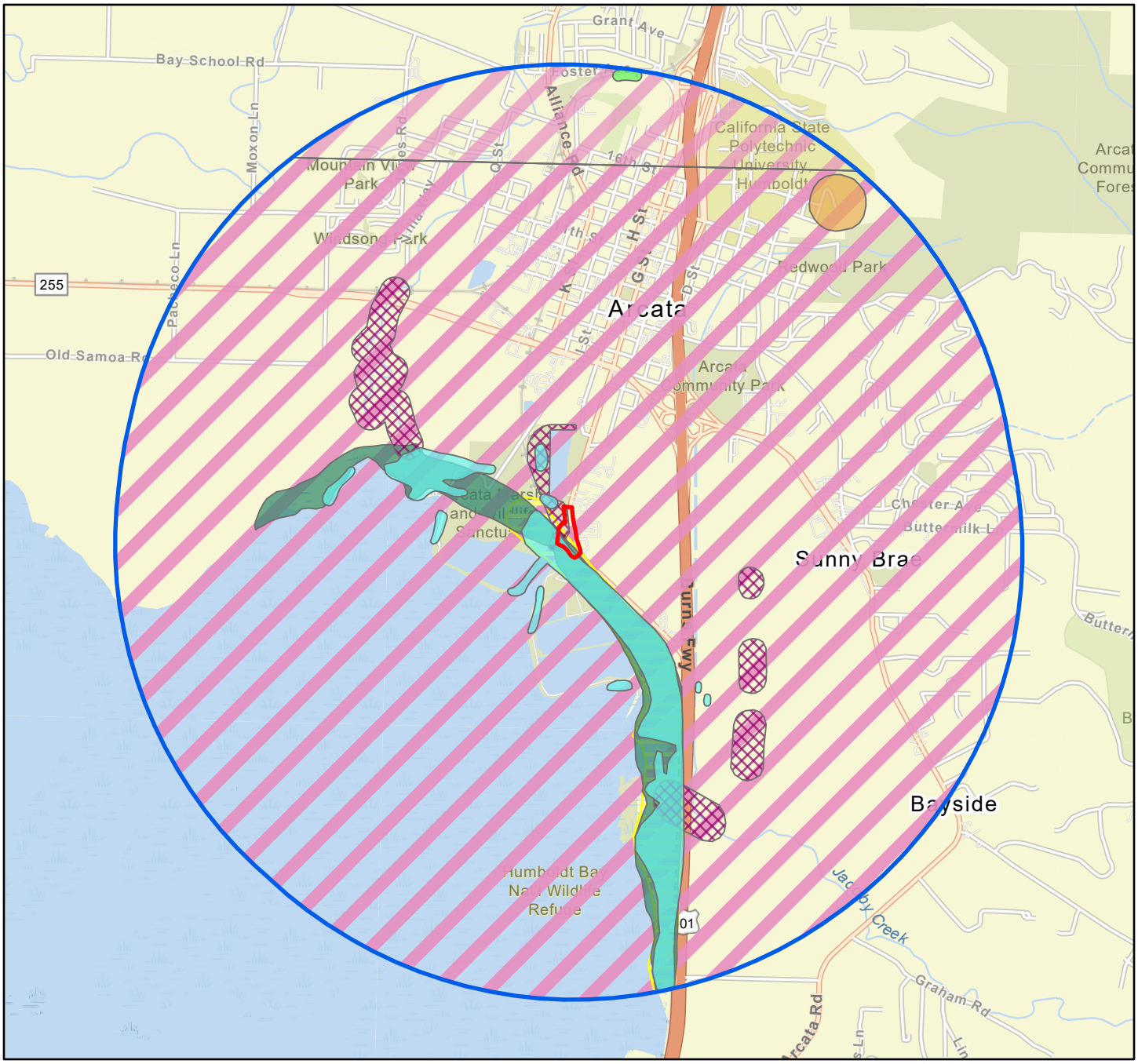
0 1,000 2,000 4,000
Feet

1:24,000 1 inch = 2,000 feet

Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS,World Imagery: Maxar,Hybrid Reference Layer: California State Parks, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA

FIGURE 1
Project Location
Pacific Gas and Electric
D-15
Arca

Exhibit 5
1-23-0808 (Pacific Gas & Electric Company)
Biological Constraints Report (pg. 22 of 25)



Legend

- 1.5-mile Study Area Buffer
- Study Area (100 ft Buffer)

CNDDB Record

- Howell's montia
- Humboldt Bay owl's-clover
- Lyngbye's sedge
- Northern Coastal Salt Marsh
- Point Reyes salty bird's-beak
- minute pocket moss
- western lily

VICINITY MAP

Notes:
1. California Natural Diversity Database (CNDDB), California Department of Fish and Wildlife, August 2023.

0 1,350 2,700 5,400
Feet
1:32,400 1 inch = 2,700 feet

Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS,World Street Map: California State Parks, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA

FIGURE 2A
Special Status Species Occurrences (Plants)
Pacific Gas and Electric
D-1
Arca

Exhibit 5
1-23-0808 (Pacific Gas & Electric Company)
Biological Constraints Report (pg. 23 of 25)

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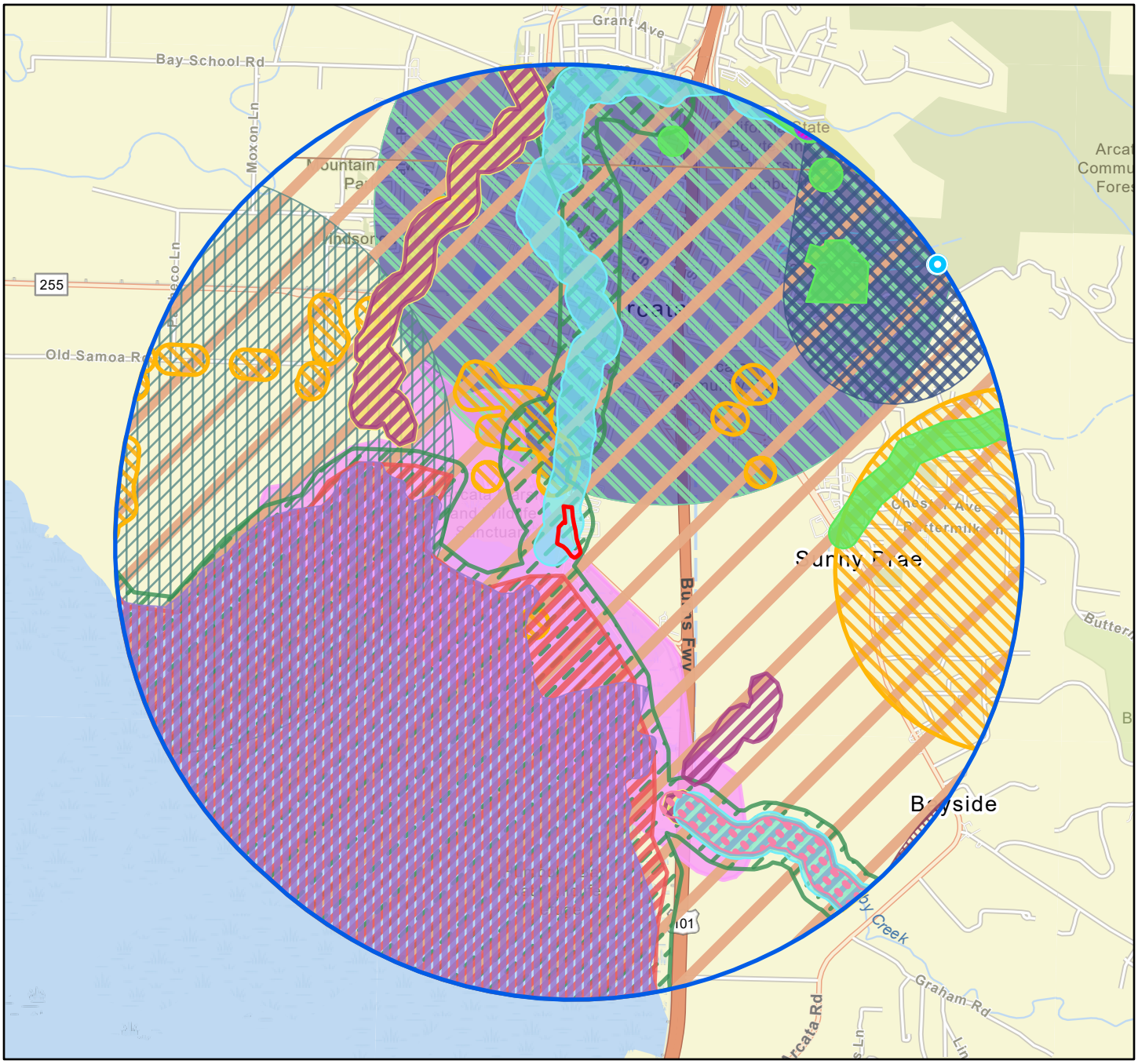

Legend

- 1.5-mile Study Area Buffer
- Study Area (100 ft Buffer)
- Spotted Owl Observation Type
  - NEG (negative)
- CNDDB Record
  - American peregrine falcon
  - Behrens' snail-eating beetle
  - Humboldt mountain beaver
  - Pacific lamprey
  - Sonoma tree vole
  - coast cutthroat trout
  - coho salmon - southern Oregon / northern California ESU
  - eulachon
  - foothill yellow-legged frog - north coast DPS
  - green sturgeon - southern DPS
  - longfin smelt
  - mountain plover
  - northern red-legged frog
  - obscure bumble bee
  - southern torrent salamander
  - steelhead - northern California DPS winter-run
  - tidewater goby
  - western bumble bee
  - western pond turtle

Notes:

1. California Natural Diversity Database (CNDDB), California Department of Fish and Wildlife, August 2023.

0 1,350 2,700 5,400
Feet

1:32,400 1 inch = 2,700 feet

Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS,World Street Map: California State Parks, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA

VICINITY MAP

FIGURE 2B
Special Status Species Occurrences (Wildlife)
Pacific Gas and Electric
D-15
Arca

Exhibit 5
1-23-0808 (Pacific Gas & Electric Company)
Biological Constraints Report (pg. 24 of 25)

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Legend

- Access
- Dewatering Hose
- Study Area (100 ft Buffer)
- EC20-137B-C Work Space
- EC20-137B-D Work Space
- Sniff Hole Work Space
- Tank & Filtration Staging
- Work Space - Sniff Hole S

NHD Flowline Type

- Stream/River
- Coastline

NWI Wetland Type

- E2EM1N: Estuarine and Marine Wetland
- E2US2N: Estuarine and Marine Wetland
- PEM1C: Freshwater Emergent Wetland
- PSS1C: Freshwater Forested/Shrub Wetland
- PUBKr: Freshwater Pond
- R3UBF: Riverine

VICINITY MAP

0 75 150 300
Feet
1:1,800 1 inch = 150 feet

Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS,World Imagery (Clarity): Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community

FIGURE 3
Project Location NHD and NWI Map
Pacific Gas and Electric
D-15
Arca

Exhibit 5
1-23-0808 (Pacific Gas & Electric Company)
Biological Constraints Report (pg. 25 of 25)

Legend

- Sample Point Location
- Access
- Dewatering Hose
- Tide Gate
- Study Area (100 ft Buffer)
- EC20-137B-C Work Space
- EC20-137B-D Work Space
- Sniff Hole Work Space
- Tank & Filtration Staging
- Work Space - Sniff Hole S
- Potentially Impacted USACE/CCC Wetland

Wetland Type

- E2US2N/E2EM1N: Estuarine and Marine Wetland
- E2US2N: Estuarine and Marine Wetland
- PEM1C: Freshwater Emergent Wetland
- PSS1C: Freshwater Forested/ Shrub Wetland
- R3UBF: Riverine

Notes:
AC = acres
LF = linear feet
SF = square feet

0 75 150 300
Feet
1:1,800 1 inch = 150 feet

Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS,World Imagery (Clarity): Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community

VICINITY MAP

FIGURE 6
Project Location – Delineated Wetland Map
Pacific Gas and Electric
D-15
Arca

Exhibit 6
1-23-0808 (Pacific Gas & Electric Company)
Wetland Delineation Map

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D-1537 L-137B MP 6.448 ECDA Dig Project

Restoration Plan

Prepared for
Pacific Gas and Electric Company
300 Lakeside Drive
Oakland, California 94612

Prepared by

433 Visitacion Avenue
Brisbane, CA 94005

October 2023

Exhibit 7
1-23-0808 (Pacific Gas & Electric Company)
Proposed Restoration Plan (pg. 1 of 10)

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1 WETLAND IMPACT OVERVIEW

1.1 EXISTING SITE CONDITIONS

Vegetation types that will be impacted by the D-1537 L-137B MP 6.448 ECDA Dig Project (project) include coastal scrub and freshwater emergent wetland. The coastal scrub habitat type is dominated by coyote brush (*Baccharis pilularis*), Himalayan blackberry (*Rubus armeniacus*), and California blackberry (*Rubus ursinus*). The freshwater emergent wetland is dominated by red fescue (*Festuca rubra*), spear saltbush (*Atriplex patula*), Himalayan blackberry, California blackberry, broadleaf cattail (*Typha latifolia*), water parsley (*Oenanthe sarmentosa*), and cinquefoil (*Potentilla anserine pacifica*).

1.2 PROJECT IMPACTS

The project will result in temporary vegetation impacts for the establishment of work areas and excavation of bell holes and one sniff hole. Work areas will be established at two locations along the pipeline, EC20-137B-C and EC20-137B-D. The work areas include approximately 0.015 acre of freshwater emergent wetlands surrounded by 0.15 acre of coastal scrub. Vegetation will be removed from the work areas, and then temporary construction matting will be placed, as necessary. Excavation will occur in approximately 0.004 acre of coastal scrub. The work areas and wetland impact areas are displayed in Appendix A, Figure 1.

2 RESTORATION OVERVIEW

Following construction activities, the project site will be passively restored. Passive restoration is considered appropriate because the seed bank and root structures will remain intact in all but 0.005 acre of the work area, and the woody vegetation present in the work areas (i.e., coyote brush and blackberry) is considered weedy. No excavation will occur in wetland areas, so topography will not be altered in these habitats. Excavated coastal scrub habitat will be returned to pre-project contours following construction.

PG&E's project biologist will oversee the restoration of the work areas and performance monitoring evaluations. The project biologist must be a professional botanist, biologist, or restoration ecologist, familiar with California flora and fauna, and have a demonstrated knowledge of and experience with similar habitat restoration projects. The project biologist must also be familiar with standard botanical sampling concepts and techniques and vegetation management practices for maintaining wetland conditions.

3 PERFORMANCE STANDARDS

Performance standards must be achieved before the restoration effort is deemed successful. Annual monitoring results will be compared with performance standards to indicate the extent to which the restoration areas area developing suitable vegetation. It is anticipated that over the monitoring period, vegetative cover, diversity, and recruitment will exhibit a marked increase.

The work areas subject to passive restoration will be monitored to show that they support a vegetation community that is consistent with adjacent reference sites following construction. As outlined in Table 1-2, species cover and richness will be documented on an annual basis until success criteria are achieved. This process is expected to take no longer than five years.

Table 1. Performance Standards

Performance Standard	**Success Criteria**
1. Minimum percent of reference site absolute cover of native vegetation	No less than reference site
2. Minimum percent of reference site native species richness	No less than reference site
3. Cover of "High" Cal-IPC species	Less than or equal to reference sites

4 MONITORING METHODS

Annual vegetation monitoring of the restoration areas will be conducted for a period of five years or until success criteria are met, whichever comes first. Vegetation monitoring will commence the spring following the completion of construction.

Vegetation monitoring will be conducted through sampling on fixed line transects that are initially randomly established and then staked and re-sampled each spring. Points will be taken every half meter in accordance with the sampling technique described by the California Native Plant Society's *An Manual of California Vegetation* (Sawyer and Keeler-Wolf, 1995). The list of plant species will also include all species observed when surveying the restoration areas.

Recording transects annually will yield data on plant composition trends and specific cover characteristics (percent hydrophytic, percent native, etc.). Annual reports will provide analysis of the transect data in reference to the performance standards.

A minimum of two photo-point stations per disturbance area will be established during the first year of monitoring to document annual progress towards achieving performance standards. A submeter-accurate global positioning system unit will be utilized to collect the points, and the compass direction of the photograph will be recorded for each point. Established photo-point stations will be used for the duration of the monitoring effort.

5 MAINTENANCE REQUIREMENTS

If it is determined by the project biologist that a passive restoration approach is not resulting in disturbed site recovery after the 2nd annual monitoring period, seeding, planting, or other active techniques may be used to ensure restoration success. The project biologist will provide an adaptive management plan in the annual report detailing specific site challenges and deficiencies and recommended mitigation actions. PG&E will consult with interested agencies if it is determined that active restoration is required for wetland sites to achieve performance criteria.

If invasive plant species with a High Cal-IPC rating become established or are approaching or exceeding the performance standard for invasive plant species, they will be targeted for removal. Invasive plants will be removed using a combination of mechanical (e.g., mowing or pruning) and chemical (i.e., herbicide application) methods, where allowed. String-line trimming also may be used instead of mowing to better target invasive plants prior to seed development while not causing damage to native plants. Herbicide will be applied by a licensed applicator, following the products specifications and/or other project permits. To reduce potential impacts to non-target organisms, herbicides will be considered that are registered for use around wetlands and waterbodies, such as AquaMaster® (Monsanto) and Rodeo® (Dow Chemical), both of which are mixtures of glyphosate and water, with the surfactant Agri-Dex®, as these formulations have been shown to be relatively non-toxic to aquatic organisms but still effective at killing broadleaf forbs and grasses.

6 REPORTING

PG&E will submit a Post-Construction Restoration Report to interested agencies by January 31 every year following the completion of the construction activities until success criteria are achieved. This report will include the following:

- Survey methods and results;
- An assessment of whether performance standards are being met;
- A discussion of management or remediation actions completed or proposed to achieve success criteria;
- A comparison of photographs taken from each photo station; and
- Conclusions and recommendations.

Monitoring and reporting of restoration progress will be conducted until success criteria are achieved. If the restoration performance criteria have been met before the final monitoring year, monitoring and reporting will cease after submission of the annual report and agency approval.

D-1537AB, Line 137B, Arcata: Water & Soil Summary

DATE: April 9, 2024

REVISED:

The following information is provided by the Water Specialist to support the PG&E ECDA Excavation Dig Project D-1537AB (EC20-137B) at Mile Post (MP) 6.448-6.457 of Line 137B (L-137B) in Arcata, Humboldt County, CA. The scope of work involves excavating and trenching to inspect pipeline and associated valves and backfilling and restoring the site.

Site-Specific Erosion and Sediment Control Plan (S-ESCP)

- A Storm Water Pollution Prevention Plan (SWPPP) is not required for this segment since the construction disturbance area is less than 0.9 acre. The work space area will be covered by an Site-Specific Erosion and Sediment Control Plan (S-ESCP).
- Best Management Practices (BMPs) identified in the S-ESCP which are relevant to the work space must be installed, maintained and removed by the contractor through the duration of the project. The Environmental Field Specialist (EFS) and Environmental Inspector (EI) will provide support during the project and will conduct compliance inspections as necessary.

Final Stabilization Plan

- Requirements for final stabilization are described in the S-ESCP.

Source Water

- The scope of work for these projects does not include hydrostatic testing (hydrotesting). Therefore, source water for hydrotesting is not required. Contractor shall contact the Water Specialist for direction on test water management should strength testing of new pipeline and/or components become necessary.

Test Water Management and Discharge

- The scope of work for this project does not include hydrotesting. Therefore, no test water management or discharge is required.

Vault Dewatering

- Any vault dewatering must comply with PG&E Utility Procedure ENV-2202P-01, and a Vault Dewatering Record (VDR) form must be completed for each dewatering event. Contractor must notify the PG&E EFS should vault dewatering be required:
    - PG&E Environmental Field Specialist – Kevin Muzikar, 530-768-7624.
- Information pertaining to PG&E's vault dewatering requirements may be found at the following link:
    - http://pgeweb/sharedservices/environmental/SS/Discharge

Pipeline Deactivation, Cleaning and Retirement

- Pipeline deactivation/retirement is not anticipated for this project; therefore, management of pipeline cleaning and rinsing solutions is not required.

Pipeline Casing Flush Water

- The scope of work for this project does not include pipeline casing removal or remediation. Therefore, management and disposal of pipeline casing flush water is not required.

Potential for Contaminated Soil

- A summary of the excavation locations and sites of potential environmental concern is provided in the attached Environmental Project Assessment (EPrA).
- Project excavations are located within 200 feet of known contamination sites. Based on available information, soil may be contaminated with petroleum hydrocarbons, dioxins/furans, and/or volatile organic compounds. One contamination site is subject to Land Use Restrictions.
- Within a specific excavation, if visual or olfactory observations indicate the presence of potentially-contaminated soil during construction, the Contractor is required to segregate all potentially-contaminated soil (i.e., either stockpile or containerize separately solid wastes) and notify the PG&E Environmental Field Specialist (EFS) to determine next steps.
    - PG&E EFS – Kevin Muzikar, 530-768-7624.
- If the storage capacity for soil at any storage location is reached, please notify the EFS before transporting the soil to an alternative storage area.
- PG&E will characterize soil suspected to have contamination; if the soil is determined to be hazardous, PG&E will be responsible for its transportation and disposal.
- Contractor is required to perform all work in compliance with best management practices specified in the S-ESCP during onsite handling of potentially-contaminated materials that are awaiting characterization and offsite disposal.

Potential for Contaminated Groundwater

- Based on information available, depth to groundwater is reported to range from 0 to 6 feet below ground surface (bgs) in the vicinity of the excavation location (see EPrA in Attachment 1). Groundwater has been encountered at projects located in the immediate vicinity.
- There is potential for groundwater contamination in the project vicinity, as summarized in the attached EPrA document. Contaminants of concern include petroleum hydrocarbons, dioxins/furans, and/or volatile organic compounds. One documented contamination site is subject to land use restrictions.
- Within a specific excavation, if visual or olfactory observations indicate the presence of potentially-contaminated groundwater during construction, the Contractor is required to segregate all potentially-contaminated groundwater (i.e., containerize separately liquid wastes) and notify the PG&E EFS to determine next steps.
    - PG&E EFS – Kevin Muzikar, 530-768-7624.
- PG&E is responsible for characterizing groundwater, if required. If the groundwater is determined to be hazardous, PG&E will be responsible for its transportation and disposal.

- Contractor is required to perform all work in compliance with best management practices identified in the S-ESCP during onsite handling of potentially-contaminated groundwater awaiting characterization and offsite disposal.

Groundwater Management & Discharge

- It is anticipated that groundwater management will be required during project construction.
- Water encountered in project excavations shall be dewatered by pumping into onsite steel or poly/baker tank(s). Groundwater storage shall be segregated from test water storage unless commingling is authorized by PG&E Hazardous Materials Subject Matter Expert (Hazmat SME) and the Water Specialist.
- Contractor shall dewater the excavations/trenches using in-pit sediment screening, as detailed in Attachment 2, Excavation Dewatering Schematic. This will prevent large particles of sediment, mud, or solids from entering the suction port of drainage pumps during dewatering.
- If sewage is encountered during excavation (broken sewer line, proximity to septic leach field), work must stop, and the EFS must be notified immediately.
- Groundwater shall be containerized until a representative sample has been sampled and characterized, if required, and authorization to transport and/or discharge has been obtained from the PG&E HazMat SME and Water Specialist.
- It is anticipated that groundwater meeting local effluent limits will be discharged to the City of Arcata's sanitary sewer collection system.
    - Prior to discharge to the sanitary sewer, groundwater will be allowed to settle in steel fractionation tanks and will be passed through particulate filtration, at a minimum, prior to discharge.
    - Details pertaining to discharge location(s), discharge rate, etc., will be communicated to the Contractor by the Water Specialist at a later date. The Water Specialist will hold a discharge tailboard meeting to review permit requirements prior to commencement of discharges to the sanitary sewer.
- Groundwater may be transported by PG&E's authorized waste hauler for disposal at a permitted offsite wastewater treatment and disposal facility.
    - PG&E Authorized Waste Water Handling Contractor – Terri Jarvis, 209-351-1082. For coordination of vacuum truck support to transport water.
- Groundwater may not be beneficially reused for dust control or discharged into any surface water drainage feature, storm drain or wetland.
- No groundwater shall be transported or discharged until authorized in writing by the PG&E Hazardous Materials Subject Matter Expert (Hazmat SME) and the Water Specialist.
- Please notify the following contacts if groundwater is encountered during excavation:
    - Environmental Inspector (EI) – TBD. For compliance questions and coordination of groundwater sampling.
    - Water Specialist – Melissa Hassler, 805-550-5809. For general questions regarding groundwater management, and permitted disposal, etc.
    - Environmental Field Specialist (EFS) – Kevin Muzikar, 530-768-7624.

Sampling Plan

Various samples will be collected by PG&E during the project. These samples are defined below.

- ***Groundwater***: PG&E may collect samples to characterize groundwater and water accumulated in excavations. Excavation dewatering samples will be collected when water is encountered during digs.
- ***Soil***: PG&E may collect soil samples to characterize excavated soil for management and offsite disposal. Soil samples may be collected either in advance of excavation; or once the soil is excavated and stockpiled onsite.

ATTACHMENT 1
PACIFIC GAS AND ELECTRIC COMPANY
D-1537AB (EC20-137B)
ARCATA, CALIFORNIA

Environmental Project Assessment

Environmental Project Assessment

The following state agency databases have been queried for active and inactive groundwater release and soil contamination sites within approximately 1,000 feet of each proposed excavation:

- California Environmental Protection Agency (Cal/EPA) State Water Resources Control Board GeoTracker database for sites that impact groundwater, especially those that require groundwater cleanup (Underground Storage Tanks [USTs], United States Department of Defense, Site Cleanup Program), as well as permitted facilities such as operating USTs and land disposal sites. GeoTracker database review also includes a query of the Groundwater Ambient Monitoring and Assessment Program (GAMA), which may provide relevant depth-to-groundwater and groundwater quality data.
- California Environmental Protection Agency Department of Toxic Substances Control (DTSC) EnviroStor Data Management System that provides information on hazardous-waste-permitted and corrective-action facilities, as well as existing site cleanup information and corrective actions that are planned, being conducted, or have been completed under DTSC oversight.

Pacific Gas and Electric Company's (PG&E) E-Screen tool within the PG&E Intranet GIS Map Server was queried for the potential presence of naturally occurring asbestos (NOA) at each proposed dig location. PG&E's groundwater risk KMZ layer (empirical PG&E data) was also queried at each proposed dig location. A summary of potential site contamination and the estimated depth to groundwater at each dig location is provided in this table. Additional database information is provided in the attached GeoTracker/EnviroStor Review Summary Table.

It should be noted that the GeoTracker and EnviroStor databases do not include all contaminated sites throughout California. Additionally, locations shown in GeoTracker and EnviroStor sometimes differ from site-specific maps or remedial actions by several hundred feet; distances and directions provided in this review should be considered approximate. Because contaminated soil and groundwater may be encountered on project sites, routine inspections of digging and trenching operations should be performed to look for the potential presence of contamination. Soil discoloration, odors, abandoned underground tanks or pipes, and buried debris are signs of potential contamination.

Project: D-1537AB (Arcata)
Location: L-137B MP 6.448
Date: 2/15/2023, revised 4/3/2024, revised 4/8/2024
Reviewer: Kelly Stynes/BAO - JACOBS

Dig Location	Potential Presence of NOA	Groundwater Depth (feet bgs)	GAMA Tool Groundwater (feet bgs)	Empirical PG&E Data (Groundwater Encountered/Composite Risk)	Contamination Summary	Comments
D-1537AB	No	0 - 6		Groundwater was encountered at T-236-13 located in the immediate vicinity. Composite risk was moderate at this project, but project team should check with former project team to clarify risk.	There are two Cleanup Program sites within 1,000 feet of this location. One site is subject to **LAND USE RESTRICTIONS.**	Based on the available information, there is potential for soil and/or groundwater to contain petroleum hydrocarbons, dioxins/furans, and/or volatile organic compounds.

Note:
bgs = Below Ground Surface
NOA = Naturally occurring Asbestos

Exhibit 8
1-23-0808 (Pacific Gas & Electric Company)
Water and Soil Summary (pg. 6 of 12)

GeoTracker/EnviroStor Review Summary

Project: D-1537AB (Arcata)
Location: L-137B MP 6.448
Date: 2/15/2023, revised 4/3/2024, revised 4/8/2024
Reviewer: Kelly Stynes/BAO - JACOBS

Dig Location	GeoTracker or EnviroStor Site Name	Distance and Direction *from* Dig Location	Estimated Depth To Groundwater at Site (ft bgs)	Groundwater Flow Direction	Site Contamination Summary	Link to Site Information	Comments and Notes
D-1537AB *S G St, Arcata, CA* *40.856341, -124.090107*	Butchers Slough (T10000021355) 600 South G Street Arcata, CA Cleanup Program Site Status: Open - Site Assessment RB Case #: 1NHU1004	~200 feet southeast	NA	NA	The Butcher Slough property is the site of former lumber mills, was partial restored to tidal habitat in the 1980's and now is part of the Arcata Marsh & Wildlife Sanctuary. Site investigation data are unavailable. Geotracker reports the site-specific constituents of concern as dioxins and furans in soil and surface water. Site is listed as open.	https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000021355	Cleanup Status History 9/18/2023 Open - Site Assessment 9/18/2023 Open - Case Begin Date
	ARCATA, CITY CORPORATION YARD (T0602393537) 600 G STREET, SOUTH ARCATA, CA 95521 Cleanup Program Site Status: Completed - Case Closed RB Case #: 1NHU767	Locations are adjacent to the Arcata City Corporation Yard boundary	0 - 6	North	Site is used by the city as a corporation yard. Contamination was encountered during upgrades and remediation removed contamination from the site. Maximum groundwater concentrations reported in the 2020 Closure Memo included: methyl tertiary butyl ether – 20 micrograms/ liter (µg/L); tertiary butyl alcohol - 48 µg/L; Maximum soil concentrations reported	https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0602393537	**LAND USE RESTRICTIONS** Excavations must be conducted in accordance with the 2020 Soil and Groundwater Management Contingency Plan. No extraction of groundwater without written authorization from the Water Board. Contact Information HEIDI M. BAUER/NORTH COAST RWQCB (REGION 1) (707) 570-3769 heidi.m.bauer@waterboards.ca.gov

Exhibit 8
1-23-0808 (Pacific Gas & Electric Company)
Water and Soil Summary (pg. 7 of 12)

Dig Location	GeoTracker or EnviroStor Site Name	Distance and Direction *from* Dig Location	Estimated Depth To Groundwater at Site (ft bgs)	Groundwater Flow Direction	Site Contamination Summary	Link to Site Information	Comments and Notes
					in the 2020 Closure Memo included: benzene – 5.6 milligrams/kilogram (mg/kg); total petroleum hydrocarbons diesel – 1,700 mg/kg. D-1537a locations appear to be close to the project area. Project was closed with **LAND USE RESTRICTIONS** in 2022.		Cleanup Status History 7/8/2022 Completed - Case Closed 2/7/2020 Open - Eligible for Closure 2/19/2019 Open - Assessment & Interim Remedial Action 12/29/2010 Open - Inactive 8/26/2003 Open - Remediation 8/26/2003 Open - Inactive 8/1/2002 Open - Site Assessment 7/16/2001 Open - Site Assessment 7/16/2001 Open - Remediation 5/26/2000 Open - Site Assessment 5/19/2000 Open - Site Assessment 5/11/2000 Open - Site Assessment 5/11/2000 Open - Case Begin Date

Note:
µg/L = micrograms/ liter
ft bgs = feet below ground surface
mg/kg = milligrams/kilogram
Locations shown in GeoTracker and EnviroStor sometimes differ from site-specific maps or remedial actions by several hundred feet; therefore, distances and directions provided in this review should be considered approximate.

Exhibit 8
1-23-0808 (Pacific Gas & Electric Company)
Water and Soil Summary (pg. 8 of 12)

D-1537AB

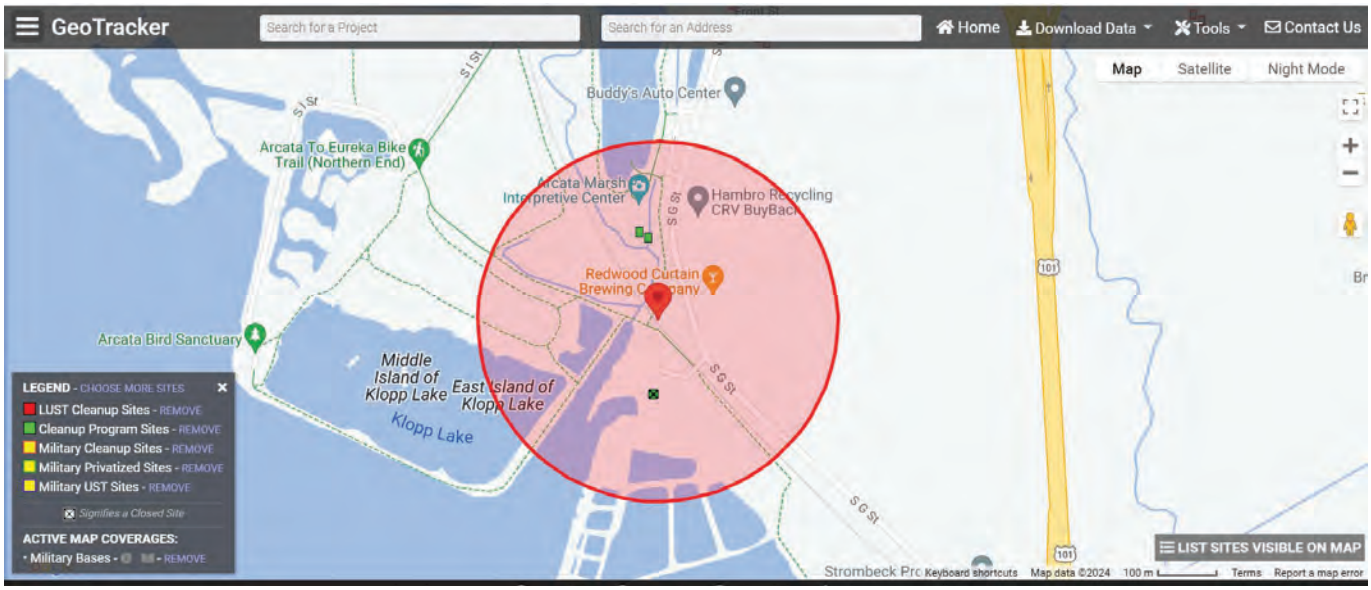


Exhibit 8
1-23-0808 (Pacific Gas & Electric Company)
Water and Soil Summary (pg. 9 of 12)

Map of ARCATA, CITY CORPORATION YARD site

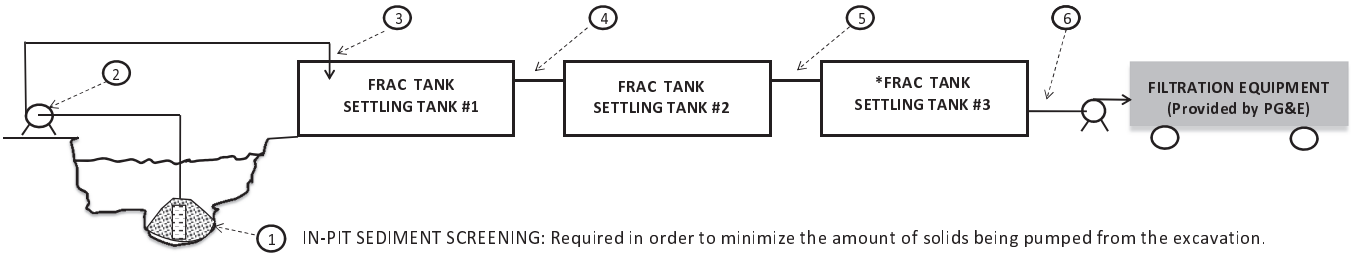
~D-1537AB

Exhibit 8
1-23-0808 (Pacific Gas & Electric Company)
Water and Soil Summary (pg. 10 of 12)

ATTACHMENT 2
PACIFIC GAS AND ELECTRIC COMPANY
D-1537AB (EC20-137B)
ARCATA, CALIFORNIA

Groundwater Dewatering Requirements

GROUNDWATER DEWATERING REQUIREMENTS



1. IN-PIT SEDIMENT SCREENING: Required in order to minimize the amount of solids being pumped from the excavation. The contractor shall install a gravel bed sump in conjunction with either a slotted well pipe or the suction strainer/screen wrap configuration as described below.

   SUCTION STRAINER:
   7 In. Dia., Opening 3/8 Inch, NPT 3 Inches, 16 Gauge Steel (Grainger or equivalent)
   Grainger Item # 1P812 Suct Strainer,7 Dia,3 NPT,Side Rnd Perf

   SCREEN WRAP MATERIAL:
   Wire Cloth, Plain Weave, Stainless Steel, Plain Finish, Mesh Size 10 x 10, Wire Dia. 0.035 In (Grainger or equivalent)
   Grainger Item # 3DLK2 Wire Cloth, 304 SS, 10 x 10 Mesh, 12 x 12 In

2. *FLOWRATE NOT TO EXCEED 100 GPM
3. PUMP DISCHARGE NO GREATER THAN 2 FEET FROM TANK TOP
4. 4" (MINIMUM) OVERFLOW CONNECTION NO GREATER THAN 2 FEET FROM TOP OF TANK
5. 4" (MINIMUM) OVERFLOW CONNECTION NO GREATER THAN 2 FEET FROM TOP OF TANK
6. PUMP SUCTION MUST BE GREATER THAN 2 FEET FROM BOTTOM CONNECTION

*Note: In the event of heavy entrained solids and/or a required continuous flow rate of > 100 GPM, Settling Tank #3 may be used as a Sand Filter backwash tank.

Groundwater Dewatering Requirements for Contractors:

The above setup is required when dewatering significant volumes for discharge to POTW or Storm Drain. In some cases, when discharging to POTW, the use of one to two settling tanks plus a small particulate (no carbon) filtration trailer may be adequate.

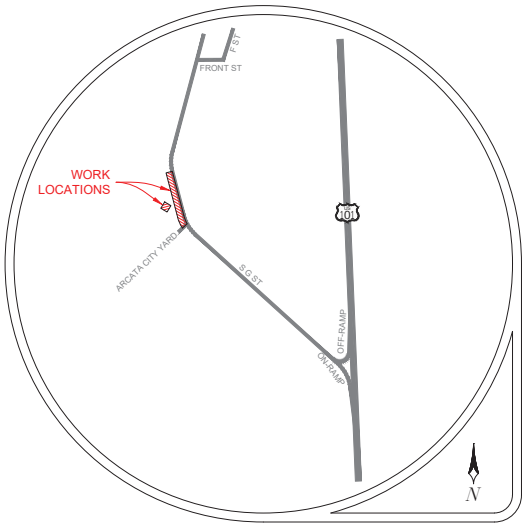
Exhibit 8
1-23-0808 (Pacific Gas & Electric Company)
Water and Soil Summary (pg. 12 of 12)

TRAFFIC CONTROL PLANS

GAS LINE RE-COATING
600 S G ST
ARCATA, CALIFORNIA

CITY OF ARCATA

PM84021985



LOCATION MAP

CONTRACTOR

MICHELS®
PACIFIC ENERGY, INC.

CONTACT: JORDAN CALKINS
PHONE# (920) 579-4198

CONSULTANT

ALMENDARIZ CONSULTING INC

ALMENDARIZ CONSULTING, INC.
1136 SUNCAST LN STE 9
EL DORADO HILLS, CA 95762
OFFICE: (916) 939-3392
FAX: (916) 720-0273
CA C31 LIC #979806

REVISIONS

REV	DESCRIPTION	REVISED BY	DATE

PROJECT NO. 230679
DRAWN LMB
DESIGNED LMB
CHECKED CAA

DATE
OCTOBER 9, 2023

SHEET 1 OF 4.2

Exhibit 9
1-23-0808 (Pacific Gas & Electric Company)
Traffic Control Plans (pg. 1 of 7)

CITY GENERAL NOTES

1. NEITHER WORK ACTIVITY NOR STORAGE OF EQUIPMENT, VEHICLES, OR MATERIAL SHOULD OCCUR WITHIN A BUFFER SPACE.
2. SIGNS ARE ONLY SHOWING TO THE PUBLIC WHEN IN USE.
3. SIGNS AND CHANNELIZING DEVICES MUST BE RETROREFLECTIVE OR ILLUMINATED DURING NIGHT OPERATIONS.
4. SIGN PANEL SIZES: 36"X36" MIN. ON ROADS <50mph, 48"x48" ON ROADS ≥ 50mph.
5. SIGNS ARE SPACED PER THE CA 2014 MUTCD (REVISION 7) MANUAL.
6. CHANNELIZING DEVICES SPACING AND TAPER LENGTHS ARE BASED ON THEIR RESPECTIVE CHARTS. (SEE CHARTS THIS PAGE)
7. NOTIFY THE LOCAL LAW ENFORCEMENT, FIRE, AND AMBULANCE COMPANIES AT LEAST 72 HOURS BEFORE CONSTRUCTION BEGINS.
8. CONTRACTOR TO MAKE SURE ALL TRAFFIC CONTROL EQUIPMENT MEETS ALL AGENCY REQUIREMENTS.
9. REMOVE ALL CONFLICTING MARKINGS FOR LONG TERM OPERATIONS (3 DAYS OR LONGER).
10. THE LOCATION OF THE SIGNS AS SHOWN ON THE ILLUSTRATIONS ARE GUIDELINES AND ACTUAL LOCATIONS WILL DEPEND UPON ALIGNMENT, GRADE, LOCATION OF STREET INTERSECTIONS AND 85% TILE POSTED SPEED LIMITS.
11. WHILE CROSSING INTERSECTIONS DURING MOBILE WORK, WORK MUST FOLLOW THE FLOW OF TRAFFIC AND PROCEED ON A GREEN LIGHT.
12. FULL COMPLIANCE IS REQUIRED WITH THE CITY AGENCY.
13. PEDESTRIAN ACCESS MUST BE MAINTAINED AS PER THE CA 2014 MUTCD (REVISION 7) STANDARDS AND ADA REQUIREMENTS.
14. SIGN SPACING IS PROVIDED IN THE CA MUTCD 2014 EDITION (REVISION 7), PART 6. TRAFFIC SPEEDS ARE BASED UPON RADAR MEASUREMENTS OF MOTORISTS. THE MUTCD ALLOWS FOR A "RANGE" IN SIGN PLACEMENT AND WILL BE PROVIDED BY DOT. THE 85TH PERCENTILE IS USED WHEN AVAILABLE TO PROVIDE A MORE ACCURATE REPRESENTATION OF MOTORISTS SPEEDS.
15. ANY WORK WITHIN 200 FT OF A SIGNALIZED INTERSECTION WILL REQUIRE CONTACT AND COORDINATION WITH CITY AGENCY PRIOR TO ANY WORK.
16. QUALITY STANDARD TO MEET REQUIREMENTS OF SECTION 1A.02 OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
17. ALL TRAFFIC CONTROL DEVICES INCLUDING: SIGNS, BARRICADES, VERTICAL PANELS, DRUMS, WARNING LIGHTS, ARROWBOARDS, CHANGEABLE MESSAGE SIGNS, CONES AND TUBULAR MARKERS THAT MEET THE REQUIREMENTS OF AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA). CA MUTCD 2014 (REVISION 7) SHALL BE USED ON THIS PROJECT/THIS WORK.
18. THE NCHRP REPORT 476 PROVIDES GUIDELINES FOR DESIGN AND OPERATION OF NIGHTTIME TRAFFIC CONTROL FOR HIGHWAY MAINTENANCE AND CONSTRUCTION. SEE TYPICAL APPLICATIONS NWTA-1 THROUGH NWTA-7. COMPLY WITH ANSI 107-2004 FOR APPAREL. HIGHWAY CONSTRUCTION WORK LIGHTING SHALL BE PER CONSTRUCTION SAFETY ORDER 1523 (CALIFORNIA CODE OF REGULATIONS TITLE 8, DIVISION1, CHAPTER 4, SUBCHAPTER 4, ARTICLE 3, SECTION 1523 - ILLUMINATIONS).
19. SIDEWALKS AT THE CONSTRUCTION LOCATION MAY BE CLOSED WITH ADEQUATE DETOURS. SIDEWALKS MAY ONLY BE CLOSED TO THROUGH TRAFFIC AND SHALL NOT PREVENT LOCAL PEDESTRIANS ACCESS. DETOURS SHALL NOT INCREASE THE PATH OF TRAVEL BY MORE THAN 500 FT. DETOUR ROUTES SHALL BE LIMITED TO EXISTING SIDEWALKS, PRIVATE PROPERTIES (SEE BELOW REQUIREMENTS) AND CROSSINGS AT ROADWAY INTERSECTIONS. TO THE MAXIMUM EXTENT FEASIBLE, THE ALTERNATE CIRCULATION PATH SHALL BE PROVIDED ON THE SAME SIDE OF THE STREET AS THE DISRUPTED ROUTE. WHERE IT IS FEASIBLE TO PROVIDE A SAME-SIDE ALTERNATE CIRCULATION PATH AND PEDESTRIANS WILL BE DETOURED, SECTION 6D.02 OF THE CA 2014 MUTCD (REVISION 7) SPECIFIES THAT THE ALTERNATE PATH PROVIDE A SIMILAR LEVEL OF ACCESSIBILITY TO THAT OF THE EXISTING DISRUPTED ROUTE . THIS MAY INCLUDE THE INCORPORATION OF ACCESSIBLE PEDESTRIAN SIGNALS (APS), CURB RAMPS, OR OTHER ACCESSIBILITY FEATURES.
20. PEDESTRIANS MAY BE DETOURED ONTO PRIVATE PROPERTY ONLY IF WRITTEN PERMISSION FROM THE PROPERTY OWNER IS OBTAINED ALONG WITH DOCUMENTATION INDICATING THAT THE CITY WOULD NOT BE LIABLE (HOLD HARMLESS) IN THE EVENT OF AN ACCIDENT.
21. DURING WORK HOURS, AT LEAST ONE WORKER SHALL BE ASSIGNED WITH THE RESPONSIBILITY TO ESCORT ELDERLY, DISABLED OR ANY OTHER PEDESTRIANS IN NEED OF ASSISTANCE THROUGH THE CONSTRUCTION SITE. A WORKER ASSIGNED WITH THIS RESPONSIBILITY MAY ALSO PARTICIPATE IN OTHER CONSTRUCTION ACTIVITIES; HOWEVER, THE ASSIGNED WORKER SHALL BE AWARE OF HIS OR HER RESPONSIBILITIES FOR PROVIDING THIS ASSISTANCE. MEASURES THAT SIMPLY CLOSE THE SIDEWALK, WITH THE EXCEPTION THAT PEDESTRIANS WILL CROSS SOMEWHERE ELSE DOES NOT ADEQUATELY SATISFY PEDESTRIAN ACCESS. PEDESTRIANS SHOULD NEVER BE DIRECTED/ EXPECTED TO CROSS A MULTI-LANE ROADWAY AT ANY LOCATION OTHER THAN AT A SIGNAL (OR ALL-WAY STOP). ACCOMMODATIONS SHOULD BE MADE ON THE SAME SIDE OF ROADWAY AS WORK.

TABLES CHART - 2014 MUTCD (REVISION 7)

Posted Speed	Taper (L) Formula	Buffer Space	Minimum Taper Lengths 10' Offset L Merge	10' Offset 1/2 L Shift	10' Offset 1/3 L Shoulder	11' Offset L Merge	11' Offset 1/2 L Shift	11' Offset 1/3 L Shoulder	12' Offset L Merge	12' Offset 1/2 L Shift	12' Offset 1/3 L Shoulder	Maximum *Cone Spacing @ Taper	@ Tangent	@ Conflict	Sign Spacing [per section] L 6C.04
25	$L = WS^2/60$	155'	104'	52'	35'	115'	57'	38'	125'	63'	42'	25'	50'	12'	100' - 200'
30		200'	150'	75'	50'	165'	83'	55'	180'	90'	60'	30'	60'	15'	120' - 240'
35		250'	204'	102'	68'	225'	112'	75'	245'	123'	82'	35'	70'	17'	140' - 280'
40		305'	267'	133'	89'	293'	147'	98'	320'	160'	107'	40'	80'	20'	160' - 320'
45		360'	450'	225'	150'	495'	248'	165'	540'	270'	180'	45'	90'	22'	360' - 540'
50	$L = WS$	425'	500'	250'	167'	550'	275'	183'	600'	300'	200'	50'	100'	25'	400' - 600'
55		495'	550'	275'	183'	605'	303'	202'	660'	330'	220'	50'	100'	25'	440' - 660'
60		570'	600'	300'	200'	660'	330'	220'	720'	360'	240'	50'	100'	25'	480' - 720'
65		645'	650'	325'	217'	715'	358'	238'	780'	390'	260'	50'	100'	25'	520' - 780'
70		730'	700'	350'	233'	770'	385'	257'	840'	420'	280'	50'	100'	25'	560' - 840'

Both are based on.
1.) 85th % Tile or if not available, then use Posted Speed Limit (PSL)

L = Taper Length
S = Speed
W = Width (Offset from path of travel

*Cones shown on the templates are illustration purposes only. Exact number of cones required shall be based on cone spacing, taper lengths, actual field conditions, etc..

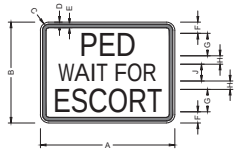
The conflict spacing shall be used on intermediate and short-term projects for taper and tangent sections where there are no pavement markings or where there is a conflict between existing pavement markings and channelizers.

CA MUTCD 2014 TABLE 6C-1 (REV 7)

MEANING OF LETTER CODES ON TYPICAL APPLICATION DIAGRAMS

ROAD TYPE	DISTANCE BETWEEN SIGNS A	B	C
URBAN - 25 MPH OR LESS	100 FEET	100 FEET	100 FEET
URBAN - MORE THAN 25 MPH TO 40 MPH	250 FEET	250 FEET	250 FEET
URBAN - MORE THAN 40 MPH	350 FEET	350 FEET	350 FEET
RURAL	500 FEET	500 FEET	500 FEET
EXPRESSWAY / FREEWAY	1,000 FEET	1,500 FEET	2,640 FEET

SPECIAL SIGN DETAIL



A	B	C	D	E	F	G	H	J
24	18	1.5	.375	6.25	2	4D	1.5	3D

*ALL MEASUREMENTS ARE IN INCHES.

REVISIONS

REV.	DESCRIPTION	REVISED BY	DATE

PROJECT NO. 230679
DRAWN LMB
DESIGNED LMB
CHECKED CAA
DATE OCTOBER 9, 2023

SHEET 2 OF 4.2

Exhibit 9
1-23-0808 (Pacific Gas & Electric Company)
Traffic Control Plans (pg. 2 of 7)

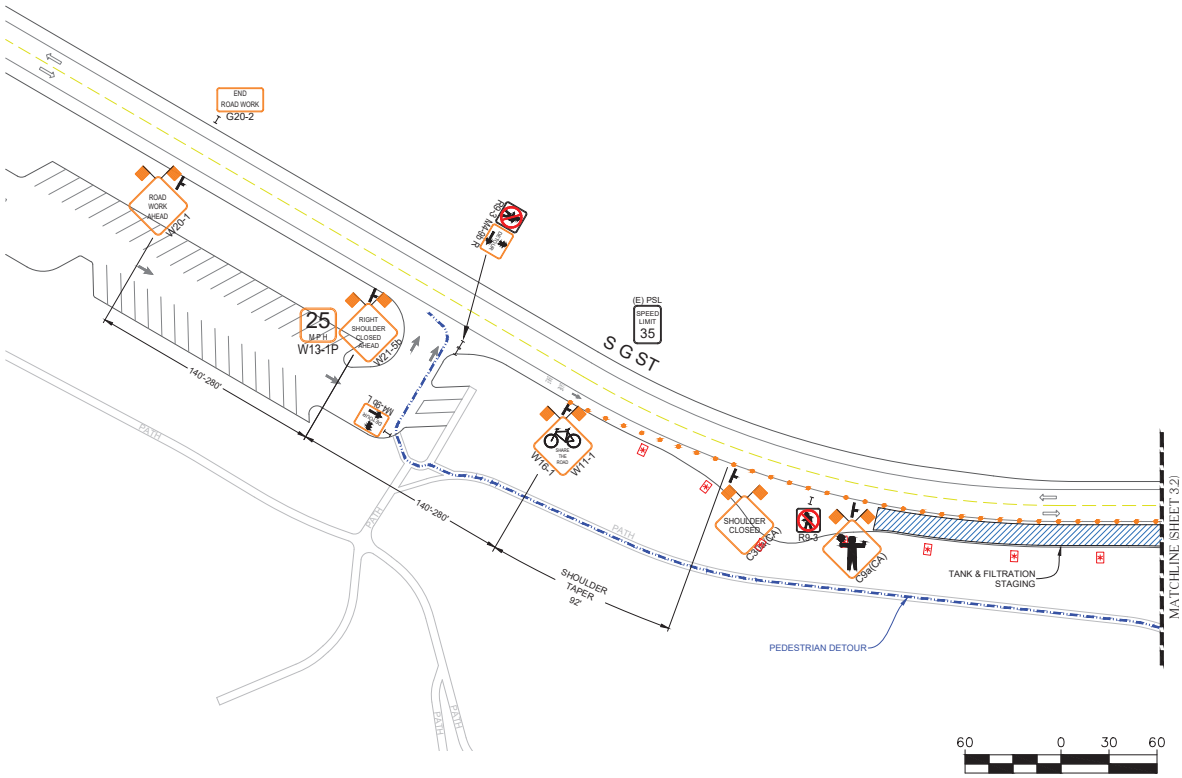
WORKING HOURS

SYMBOL LEGEND

- CONSTRUCTION SIGN
- FLAGGER
- 28" CONE
- TYPE I BARRICADE
- TYPE III BARRICADE
- NO PARKING SIGN ON TYPE I BARRICADE TO BE PLACED 72 HOURS IN ADVANCE
- FLASHING ARROW BOARD SIGN

NOTES

- CONTRACTOR SHALL MAINTAIN/PROVIDE ACCESS TO ALL DRIVEWAYS AFFECTED BY THE WORK AREA.
- CONTRACTOR SHALL ASSIGN A WORKER TO ASSIST PEDESTRIANS AROUND WORK AREA.
- CONTRACTOR SHALL MAINTAIN A MINIMUM 4' PATH OF TRAVEL FOR PEDESTRIANS.
- W20-1 (ROAD WORK AHEAD) SIGNS SHALL BE PLACED ON ALL SIDE STREETS BETWEEN THE WORK AREA AND THE FIRST SIGN ENCOUNTERED BY TRAFFIC ON THE HWY.
- MAXIMUM CHANNELIZING DEVICE SPACING FOR ALL SPEEDS ON DOWNSTREAM TAPERS IS 20'.



CONST. HOURS: 8:00AM-3:00PM MON-FRI

REVISIONS

REV.	DESCRIPTION	REV. BY/INIT.	DATE

PM84021985

ROADS < 50 MPH: MINIMUM 36" SIGN PANELS (48" SIGNS MAY BE USED)

ROADS ≥ 50 MPH: MINIMUM 48" SIGN PANELS

ALMENDARIZ CONSULTING
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CA C31 LIC #979806

LOCATION: 600 S G ST, ARCATA, CA

MICHELS® PACIFIC ENERGY, INC.

CONTACT: JORDAN CALKINS
PHONE# (920) 579-4198

PROJECT NO. 230679
DRAWN LMB
DESIGNED LMB
CHECKED CAA
DATE OCTOBER 9, 2023

SHEET 3.1 OF 4.2

Exhibit 9
1-23-0808 (Pacific Gas & Electric Company)
Traffic Control Plans (pg. 3 of 7)

WORKING HOURS

SYMBOL LEGEND

- CONSTRUCTION SIGN
- TYPE I BARRICADE
- TYPE III BARRICADE
- 28" CONE
- FLAGGER
- NO PARKING SIGN ON TYPE I BARRICADE TO BE PLACED 72 HOURS IN ADVANCE
- FLASHING ARROW BOARD SIGN

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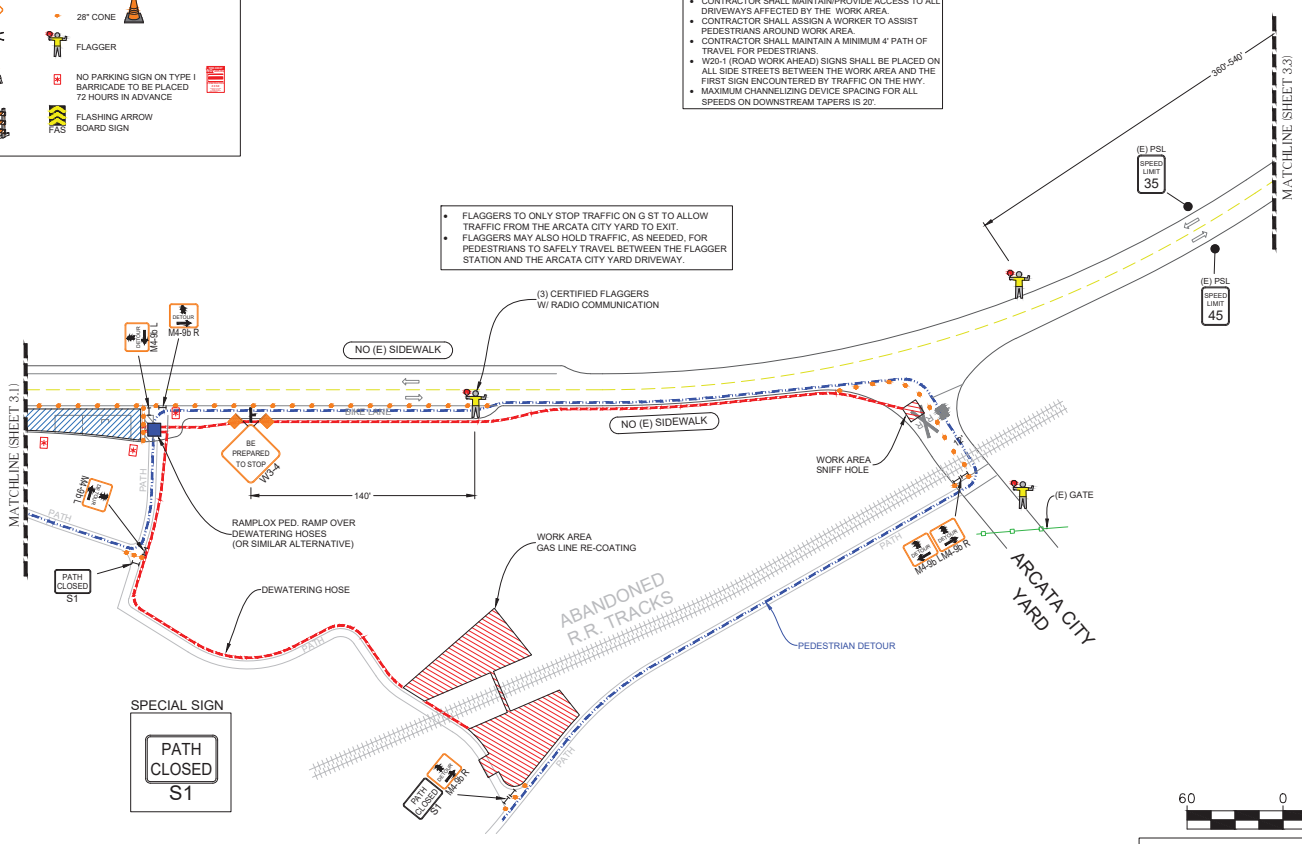
- MAXIMUM CHANNELIZING DEVICE SPACING FOR ALL SPEEDS ON DOWNSTREAM TAPERS IS 20'.

- FLAGGERS TO ONLY STOP TRAFFIC ON G ST TO ALLOW TRAFFIC FROM THE ARCATA CITY YARD TO EXIT.
- FLAGGERS MAY ALSO HOLD TRAFFIC, AS NEEDED, FOR PEDESTRIANS TO SAFELY TRAVEL BETWEEN THE FLAGGER STATION AND THE ARCATA CITY YARD DRIVEWAY.



SPECIAL SIGN

PATH CLOSED
S1

60 0 30 60

CONST. HOURS: 8:00AM-3:00PM MON-FRI

REVISIONS

REV.	DESCRIPTION	REV. BY/INI.	DATE

PM84021985

ROADS < 50 MPH: MINIMUM 36" SIGN PANELS (48" SIGNS MAY BE USED)

ROADS ≥ 50 MPH: MINIMUM 48" SIGN PANELS

ALMENDARIZ CONSULTING
1136 SUNCAST LN STE 9
EL DORADO HILLS, CA 95762
OFFICE: 916) 939-3392 - FAX: (916) 916-720-0273
CA C31 LIC #979806

LOCATION: 600 S G ST, ARCATA, CA

MICHELS® PACIFIC ENERGY, INC.

CONTACT: JORDAN CALKINS
PHONE* (920) 579-4198

PROJECT NO. 230679
DRAWN LMB
DESIGNED LMB
CHECKED CAA

DATE
OCTOBER 9, 2023

SHEET 3.2 OF 4.2

Exhibit 9
1-23-0808 (Pacific Gas & Electric Company)
Traffic Control Plans (pg. 4 of 7)

WORKING HOURS

SYMBOL LEGEND

- CONSTRUCTION SIGN
- FLAGGER
- 28" CONE
- TYPE I BARRICADE
- TYPE III BARRICADE
- NO PARKING SIGN ON TYPE I BARRICADE TO BE PLACED 72 HOURS IN ADVANCE
- FLASHING ARROW BOARD SIGN (FAS)

NOTES

- CONTRACTOR SHALL MAINTAIN/PROVIDE ACCESS TO ALL DRIVEWAYS AFFECTED BY THE WORK AREA.
- CONTRACTOR SHALL ASSIGN A WORKER TO ASSIST PEDESTRIANS AROUND WORK AREA.
- CONTRACTOR SHALL MAINTAIN A MINIMUM 4' PATH OF TRAVEL FOR PEDESTRIANS.
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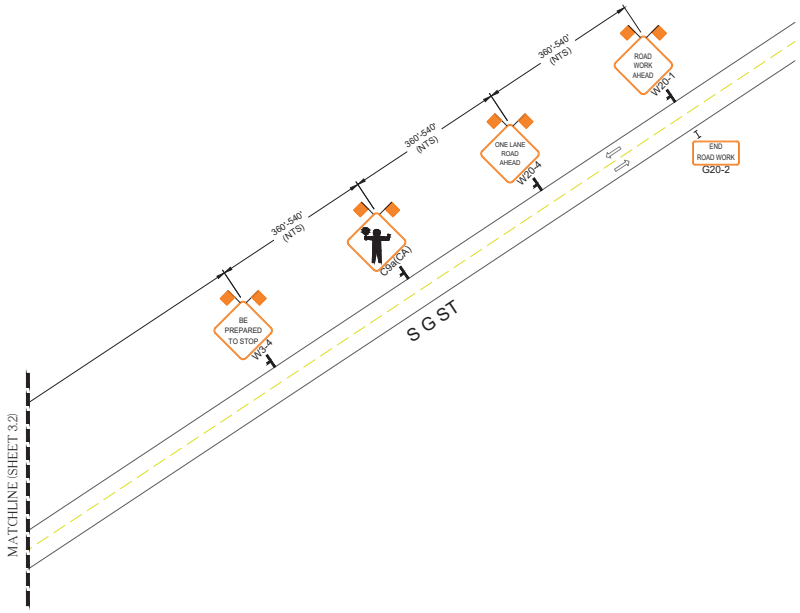

60 0 30 60

CONST. HOURS: 8:00AM-3:00PM MON-FRI

REVISIONS

REV.	DESCRIPTION	REV. BY/INIT.	DATE

PM84021985

ROADS < 50 MPH: MINIMUM 36" SIGN PANELS (48" SIGNS MAY BE USED)

ROADS ≥ 50 MPH: MINIMUM 48" SIGN PANELS

ALMENDARIZ CONSULTING
1136 SUNCAST LN STE 9
EL DORADO HILLS, CA 95762
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CA C31 LIC #979806

LOCATION: 600 S G ST, ARCATA, CA

MICHELS® PACIFIC ENERGY, INC.

CONTACT: JORDAN CALKINS
PHONE* (920) 579-4198

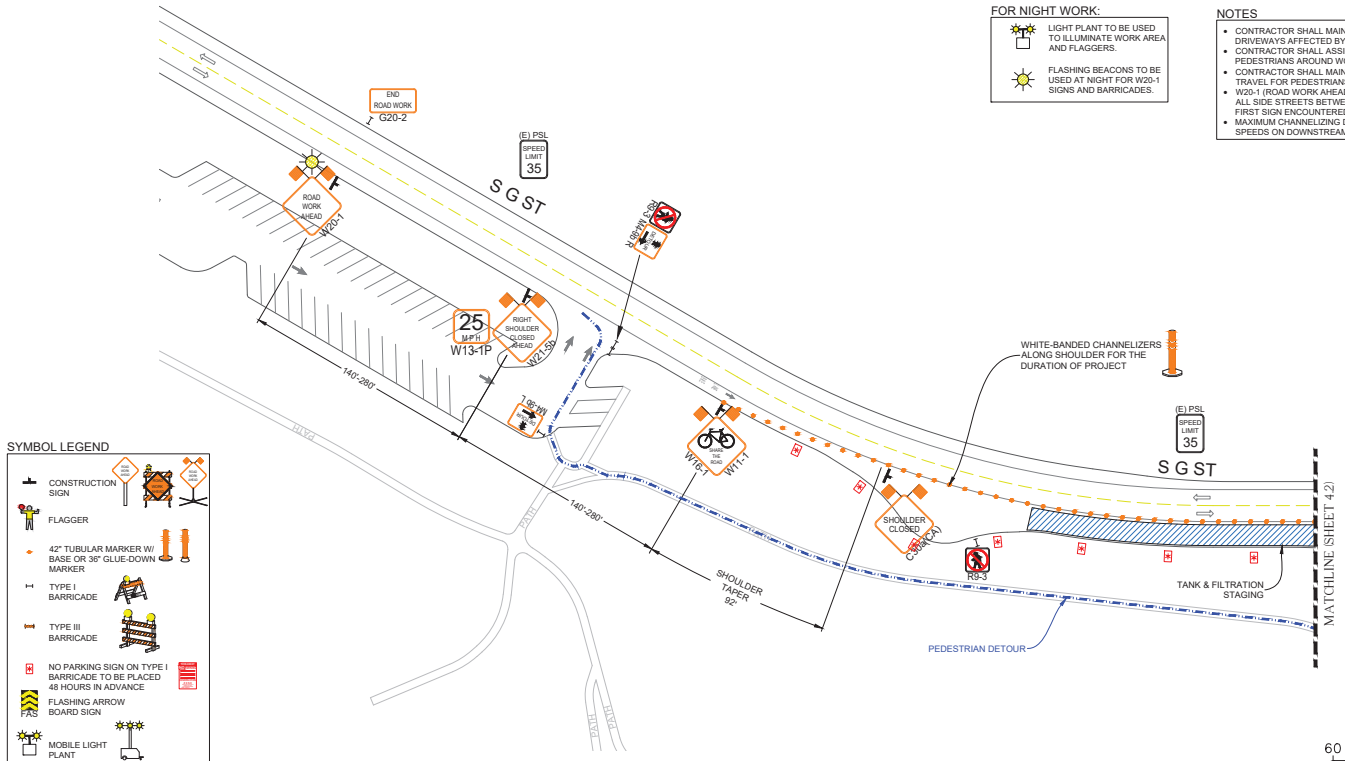
PROJECT NO. 230679
DRAWN LMB
DESIGNED LMB
CHECKED CAA

DATE
OCTOBER 9, 2023

SHEET 3.3 OF 4.2

Exhibit 9
1-23-0808 (Pacific Gas & Electric Company)
Traffic Control Plans (pg. 5 of 7)

NON-WORKING HOURS



FOR NIGHT WORK:

- LIGHT PLANT TO BE USED TO ILLUMINATE WORK AREA AND FLAGGERS.
- FLASHING BEACONS TO BE USED AT NIGHT FOR W20-1 SIGNS AND BARRICADES.

NOTES

- CONTRACTOR SHALL MAINTAIN/PROVIDE ACCESS TO ALL DRIVEWAYS AFFECTED BY THE WORK AREA.
- CONTRACTOR SHALL ASSIGN A WORKER TO ASSIST PEDESTRIANS AROUND WORK AREA.
- CONTRACTOR SHALL MAINTAIN A MINIMUM 4' PATH OF TRAVEL FOR PEDESTRIANS.
- W20-1 (ROAD WORK AHEAD) SIGNS SHALL BE PLACED ON ALL SIDE STREETS BETWEEN THE WORK AREA AND THE FIRST SIGN ENCOUNTERED BY TRAFFIC ON THE HWY.
- MAXIMUM CHANNELIZING DEVICE SPACING FOR ALL SPEEDS ON DOWNSTREAM TAPERS IS 20'.

SYMBOL LEGEND

- CONSTRUCTION SIGN
- FLAGGER
- 42" TUBULAR MARKER W/ BASE OR 36" GLUE-DOWN MARKER
- TYPE I BARRICADE
- TYPE III BARRICADE
- NO PARKING SIGN ON TYPE I BARRICADE TO BE PLACED 48 HOURS IN ADVANCE
- FLASHING ARROW BOARD SIGN
- MOBILE LIGHT PLANT
- FLASHING BEACON

60 0 30 60

24-HOUR TRAFFIC LAYOUT

REVISIONS

REV.	DESCRIPTION	REV. DRWN BY	DATE

PM84021985

ROADS < 50 MPH: MINIMUM 36" SIGN PANELS (48" SIGNS MAY BE USED)

ROADS ≥ 50 MPH: MINIMUM 48" SIGN PANELS

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Traffic Control Plans (pg. 6 of 7)

NON-WORKING HOURS

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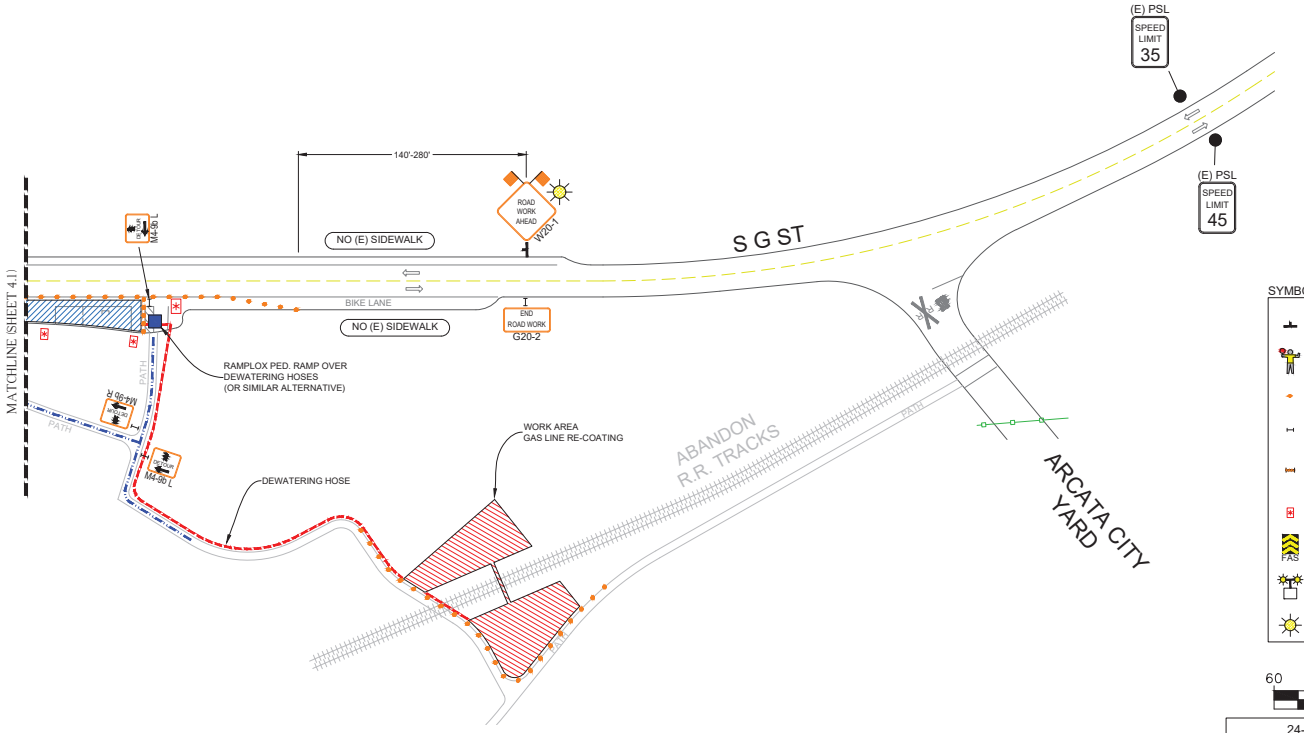

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Traffic Control Plans (pg. 7 of 7)