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SECTION 3.0 REVISED PROJECT DESCRIPTION

Microsoft provides the following Revised Project Description to include the following modifications to Chapter 3 of the Small Power Plant Exemption (SPPE) Application (Project Description) filed with the California Energy Commission (CEC) in September 2022 for the San Jose Data Center Campus (Project or SJ04). The modifications to the original Project Description are shown in "track changes format" below to assist the CEC Staff in identifying the components of the Project that have been modified or added to the Project. Specifically, the modifications and additions to the original Project Description reflect the following:

- The footprint of the two buildings on the Project Site (as that term is defined below) have been rotated counter-clockwise approximately 4 degrees to achieve FAA issuance of Notices of Determination of No Hazard for the Project Site. Where appropriate the Figures included in this section have been revised to reflect the rotation of the building footprints. No other changes to any aspect of the proposed buildings or site plan required modification in order to obtain the FAA Final Notices of Determinations, which are included in Appendix J.
- The lot line adjustment described in the original SPPE Application has been completed and therefore reference to it has been deleted and the Project Site acreage has been adjusted to include the additional acreage.
- Microsoft is proposing a minor modification to Project Design Feature PDF HAZ-1.1 to clarify the legal requirements for soliciting oversight and preparation of a Site Management Plan (SMP) from an agency in addition to the oversight by the City of San José.
- Pacific Gas & Electric (PG&E) has further analyzed its ability to serve the Project and determined that reconductoring of approximately 12 miles of some of its existing transmission line would be necessary in order to serve the Project. PG&E would construct and continue to own and operate the regional transmission line that will be reconductored. A full description of the proposed PG&E reconductoring work including the addition of two microwave communication towers, its associated construction activities, and the existing permit measures PG&E will implement during construction to minimize potential environmental impacts are included in Section 3.5 of this SPPE Application.
- The original Project Description has been reorganized to clarify the components of the Project that are within the "Project Site" and the components of the Project that are within the "Offsite Infrastructure Areas".
- Further details are provided for minor components of the project that were not available at the time of preparation of the original SPPE Application but have been discovered during further project design, responses to CEC data requests, or to address public comments.

~~**Section 3.0**~~

3.1 OVERVIEW OF PROPOSED PROJECT

Microsoft Corporation (Microsoft) proposes to build the San José Data Center campus (~~the~~ Project or SJ04) to be located at the northwest corner of the intersection of Orchard Parkway and Component Drive in San José, California. ~~The Project will include two data center buildings; emergency backup generating facilities; recycled water storage, fire water storage, pipeline and support buildings; building cooling equipment; an on-site substation and switchyard; two potential distribution~~

~~transmission lines; and ancillary support facilities.~~The Project will include components that will be constructed within the Project Site as described in Section 3.3.1 and within the Offsite Infrastructure Areas as described in Section 3.3.9. The primary components of the Project that will be constructed on the Project Site include the following:

- Two four-story data center buildings, each encompassing approximately 315,429 gross square feet;
- Parking;
- Security fencing and guard house;
- Site access and entrances;
- Recycled and fire water storage facilities and associated single-story support structures;
- Project Substation;
- PG&E Switching Station and the transmission line interconnecting the PG&E Switching Station to the existing PG&E regional transmission line that crosses the Project Site;
- PG&E microwave communication tower to be located within the on-site PG&E Switching Station;
- Landscaping;
- On site Stormwater Treatment and conveyance features;
- On-site underground utility piping; and
- Emergency backup generating facilities incorporated into generator rooms within each data center building and within the water storage and treatment area.

The primary components of the Project that will be constructed within Offsite Infrastructure Areas include the following:

- An approximately 1.5 mile recycled water pipeline extension from the Project Site to the existing recycled water main at the intersection of Montague Expressway and Kruse Drive in the City of San José;
- Utility pipeline interconnections that extend from the Project Site boundary to existing potable water, sewer and storm drain infrastructure located within Orchard Parkway;
- Intersection improvements at the southwest and southeast corners of the Trimble Road and Orchard Parkway intersection;
- Funding of City of San Jose future improvements for: 1) a bike lane within the existing right of way for Orchard Parkway and immediately adjacent to the Project Site's eastern boundary; and 2) signaling at the intersection of the existing Orchard and Component Drive; and
- PG&E Reconductoring Project of approximately 12 miles of an existing PG&E's regional transmission line, including a microwave tower to be located within the Zanker Road Substation at the City of San Jose/Santa Clara Regional Water Treatment Facility.

For CEQA purposes, all of the project components to be constructed and operated on the Project Site together with all of the components to be constructed and operated within the Offsite Infrastructure Areas are treated as the "Project". As described in more detail below, the PG&E Reconductoring Activities is included in this SPPE Application for the sole purposes of enabling the CEC to prepare a comprehensive CEQA analysis even though the CEC has no jurisdiction over PG&E or any aspect of the Reconductoring Activities.

~~The~~
~~Each data center building will be four stories. Each building will encompass approximately 315,639 gross square feet. Each data center building will incorporate the emergency backup generating facilities within generator rooms dedicated to supporting the emergency electricity needs of the floor of the building in which the generator room is located. The total maximum electrical demand of the Project will be 97.8 MW. The backup generating facilities will consist of (32) 3,000 kW primary emergency generators; (2) 500 kW administrative emergency generators; and (2) 800 kW storage tank area emergency generators. The sole purpose of the foregoing backup generating facilities is to provide electrical power to support the data center campus operations in the event of loss of electrical service from the local electric utility provider, Pacific Gas & Electric Company (PG&E).~~The Project purpose and objectives and detailed descriptions of each of the Project components are provided in following sections.

3.2 PROJECT PURPOSE AND OBJECTIVES

Microsoft's specific Project objectives are as follows:

- Meet the continuing need for a data center to support the San José region's growing business and work force population as well as its growth as a center of innovation consistent with San José's planned land use vision.
- Construct and operate a data center that maximizes the use of the Project Site to house computer servers, supporting equipment, and associated administrative office uses in an environmentally controlled structure with redundant subsystems (cooling, power, network links, storage, fire suppression, etc.) and can be built in two phases to accommodate customer growth.
- Locate the data center on property long-planned for industrial uses that is in proximity to existing circulation and utility infrastructure, emergency response access, and on a site capable of being protected, to the maximum extent feasible, from security threats, natural disasters, and similar events.
- Design the proposed data center such that it can be provided with operational electric power via a new electric 115-kilovolt (kV) substation, and efficiently extend, connect to or otherwise install other utility infrastructure to adequately serve the Project, including water, storm drainage, sanitary sewer, electric and telecommunications, as well as new bike trail improvements.
- Ensure the data center achieves reduced access latency (defined as the time it takes to access data across a network).
- To incorporate the most reliable and flexible form of backup electric generating technology into the data center considering the following evaluation criteria:

- **Reliability**. The selected backup electric generation technology must be extremely reliable in the case of an emergency loss of electricity from the utility.
    - The backup generating facility must provide a higher reliability than 99.999 percent in order for the data center to achieve an overall reliability of equal to or greater than 99.999 percent.
    - The backup generating facility must provide reliability to the greatest extent feasible during natural disasters including earthquakes.
    - The selected backup electric generation technology must have a proven built-in resilience so if any of the backup unit(s) fail due to external or internal failure, the system will have redundancy to continue to operate without interruption.
    - The data center must have an on-site means to sustain power for 48-hours minimum in failure mode, inclusive of utility outage.
- **Commercial Availability and Feasibility**. The selected backup electric generation technology must currently be in use and proven as an accepted industry standard for technology sufficient to receive commercial guarantees in a form and amount acceptable to financing entities. It must be operational within a reasonable timeframe where permits, entitlements and approvals are required.
- **Technical Feasibility**. The selected backup electric generation technology must utilize systems that are compatible with one another.

- Incorporate use of renewable fuels where feasible as primary fuel for backup generators.
- Incorporate, as feasible, environmentally sustainable features into the Project, such as bird-friendly building design components.

3.3 PROJECT FEATURES AND COMPONENTS

3.3.1 Project Site Description

The Project ~~Site~~will be is located at the northwest corner of the intersection of Orchard Parkway and Component Drive in San José, California. The ~~majority of the Project Site is~~data center buildings; emergency backup generating facilities; project substation; water storage and treatment area; and the PG&E Switching Station, transmission lines and microwave communication tower would be located on APN 101-02-020~~. A portion of the PG&E Switching Station will be located on APN 101-02-019, which will be incorporated into the Project through a lot line adjustment/merger. The combination of the two foregoing areas encompasses approximately 22.29 acres of land and will be~~[1], (hereinafter referred to ~~herein~~ as the ~~"~~"Project ~~Site".~~Site") which is approximately 22.24 acres.. As described in Section 3.3.9~~2~~ below, the Project also includes the installation of ~~off-site~~infrastructure improvements, including: a recycled water line (the "Recycled Water Line") and other utility infrastructure, PG&E's

[1] The original SPPE Application described that the PG&E Switching Station would be located on a portion of APN 101-02-019 and that Microsoft had applied for a lot line adjustment. The lot line adjustment has been completed and the portion of APN 101-02-019 has been legally included into APN 101-02-020.

reconductoring work (the "Reconductoring Activities"), and may include offsite intersection improvements . ~~These areas~~ These areas upon which the Infrastructure Improvements would be constructed together total approximately 42 acres, will be referred to collectively as the "Off-Site Infrastructure Areas." The Project Site and the improvements within the Offsite Infrastructure Areas together comprise the "Project". For purposes of a conservative CEQA analysis, it is assumed that all components described in this chapter will be part of the Project.

The Project Site has a General Plan land use ~~designation~~designations of CIC-Combined Industrial/Commercial and IP-Industrial Park, and is zoned CIC Combined Industrial/Commercial. It is currently undeveloped with sparse grasses and a few trees along the western and northern boundaries. The Project Site is irregularly shaped and is generally bound to the north by an existing 2-story facility with office and manufacturing uses, to the south by an existing 5-story office facility, to the east by Orchard Parkway and undeveloped property and to the west by the Guadalupe Trail and Guadalupe River.

Parcels near the Project Site consist primarily of commercial and industrial land uses to the north, east and south. Uses to the west include the Bayshore Highway, approximately 500 feet west of the Project Site, and the Norman Y. Mineta San José International Airport, approximately 750 feet ~~to~~from the ~~west of~~Project Site at the ~~closest property line~~nearest point. The nearest residential area and the closest school are each approximately 0.8 mile to the north of the Project Site.

~~Buildings~~Existing buildings in the vicinity of the Project Site to the north, south and east are similar in height and scale to the proposed data center buildings.

~~3.3.2 Project's Off-Site Infrastructure Improvements~~

~~These improvements are located within the Off-Site Infrastructure Areas (defined above), which are within existing public right-of-way. The total amount of off-site ground disturbance will be approximately 0.36 acre.~~

~~The~~ ~~Project will install potable water, recycled water, fire water, storm water and sanitary sewer pipelines within the existing rights-of-way immediately adjacent to the Project Site, for purposes of connecting the Project to necessary wet utilities.~~

~~In addition, the Project will install approximately 1.5 miles of new underground recycled water pipeline which will connect to the existing recycled water main at the intersection of Montague Expressway and Kruse Drive in the City of San José.~~

~~3.3.3~~ 3.3.2 General Site Arrangement and Layout

The ~~Project's~~ general ~~site~~ arrangement and layout of the Project Site is shown on Figure 3.2-1~~.~~. The two four-story data center buildings will cover the majority of the Project Site~~. The primary access road will surround both, buildings with parking located on the eastern side of the buildings.~~ A new substation and PG&E-owned and operated switching station and microwave tower will be located in

the northeast corner of the Project Site. The recycled water storage tanks, a fire water storage tank, tank ~~support~~utility buildings and associated backup generators will be located in the northwest portion of the Project Site. ~~Site potable~~

The primary access road will surround both buildings with surface parking located on the eastern side of the buildings. Potable water, recycled water, fire water, storm water and sanitary sewer pipelines will be interconnected to existing City of San José infrastructure located immediately adjacent to the Project Site within the existing right of way for Orchard Parkway. Recycled water will be provided from a new approximately 1.5-mile underground pipeline as described in Section 3.3.9.2~~3.3.6.1 below~~.

~~3.3.3.1~~ 3.3.2.1 *Site Access and Parking*

Primary access to the Project Site will be provided by a new entrance ~~to the site~~ at Orchard Parkway~~.~~, configured to allow for a truck turn around. The entrance will be secured and access to the facility will be monitored through a guard house ~~and will provide the ability for a truck turn around.~~. Pedestrian and bicycle turnstiles will be provided immediately adjacent to south side of the primary entrance. The secondary entrance is at the north boundary near the onsite substation and will be through an easement with the property immediately north of the ~~site.~~Project Site. The secondary access will primarily be used for emergency access to the ~~site~~Project Site.

The City no longer requires off-street parking. The Project will provide approximately 145~~8~~ parking spaces at full buildout~~. Approximately 74 parking spaces will be provided for the first building. Approximately 74 parking spaces will be provided for the second of two buildings.~~

The Project will ~~provide approximately 17 parking~~satisfy all applicable standards and requirements relating to spaces for Electric Vehicle, Clean Air and Vanpool ~~parking spaces~~(approximately 17 Electric Vehicle and 10 Clear Air / Carpool) ~~-~~in compliance ~~-~~with applicable Cal Green requirements identified in Section 5.106.5 (Site Development – Non-Residential). The Project will provide 4 Class I long term, utilizing 2-double bicycle lockers and 14 Class II short term bicycle racks split between two locations with the Project Site.

~~3.3.4~~ 3.3.3 Data Center Buildings

The Project will include two four ~~-~~story data center buildings, each encompassing approximately 315,~~639~~429 gross square feet. Each data center building will include a total of approximately ~~8,883~~9,593 square feet of administrative space, ~~including~~which will house restrooms and shower facilities, storage areas, and loading docks. Figures 3.2-2 through 3.2-5 include the floor plans for each data center building, and Figure 3.2-6 shows the roof plan. Figures 3.2-7 and 3.2-8 provide building elevations. The proposed data center buildings will house computer servers for private clients in a secure and controlled structure. Each building will be designed for a maximum demand of 48.5 megawatts (MW) of electricity. In addition, the storage tank area will be designed for a maximum demand of 0.8 megawatts (MW) of electricity. The structures will be architecturally treated, as appropriate, to be compatible with the surrounding context of the Project Site and in coordination with the City of San José and consistent with applicable standards and guidelines. The

buildings will be constructed of steel framing supporting concrete composite slab or mass timber with steel braced frames. Each building envelope will consist of a combination of Exterior Insulation Finishing System (EIFS), Insulated Metal Panels (IMP), and curtainwall glazing. The entries will include storefront glazing.

~~The southern building will be the first to be constructed and is designated SJ04. The northern building is designated SJC06 and is estimated to be constructed immediately following occupation of the first building.~~

~~3.3.4.1~~ 3.3.3.1 *Building Heights and Setbacks*

~~The~~Each data center ~~buildings~~building will be approximately 101 feet at the roof's high point with parapet walls extending to a height of approximately 136 feet above the Level 1 slab height at the high point. The parapet/screen walls will extend to a height of approximately 40 feet above the roof level to conceal the rooftop mechanical and electrical equipment and provide sound attenuation.

Building SJ04 will be constructed on the southern portion of the ~~Project~~Data Center Site and will be set back ~~a minimum of~~ approximately 380 feet from the northern property line (at the nearest point); approximately ~~88~~77 feet from the southern property line; approximately ~~145~~142 feet from the western property line; and approximately ~~565~~568 feet from the ~~easter~~eastern property line and Orchard Parkway.

Building ~~SJC06~~SJ06 will be constructed on the northern portion of the ~~Project~~Data Center Site and will be set back ~~a minimum of~~ approximately ~~122~~88 feet from the northern property line; approximately ~~454~~444 feet from the southern property line; approximately ~~160~~156 feet from the western property line; and approximately ~~644~~645 feet from the eastern property line and Orchard Parkway.

The distance between Building SJ04 and SJ06 will be approximately 126 feet.

~~3.3.4.2~~ 3.3.3.2 *Building Cooling System*

Data Hall Cooling and Electrical Rooms

An indirect evaporative cooling (IDEC) system will be used to reject heat from the data center. Each data center room, called "Colos" (9.6 MW IT load), will be comprised of four cells or data halls (2.4 MW IT load per cell) and associated electrical rooms. The IDEC system will utilize hybrid closed-circuit fluid coolers mounted on the roof. Recycled water (makeup water) will be provided by the San José Municipal Water System (SJMWS). The fluid coolers will be capable of operating in dry mode to conserve water when the ambient conditions are conducive.

Cooling water from the fluid coolers will be pumped to indoor air handling units (AHUs) equipped with cooling coils. The units will be installed in dedicated mechanical galleries along the perimeter of the Colos. The AHUs will operate in 100% recirculation mode and conditioned air will be

discharged directly into the ~~room~~rooms to cool the critical equipment (IT cabinets, uninterruptible power supply (UPS) systems, etc.). Warm air will be routed back to the AHUs using the suspended ceiling as a return air plenum.

The battery rooms will be conditioned using split-system direct expansion (DX) water-cooled AC units connected to the cooling water loop. There will be two AC units per ~~Battery Room~~battery room. AC units will utilize R410A refrigerant.

Outside air for ventilation and pressurization of the Colos will be provided by water-cooled DX packaged Dedicated Outside Air ~~Unit~~System (DOAS) units connected to the cooling water loop. There will be four ~~dedicated outside air~~DOAS units per 9.6 MW Colo ~~that~~, all of which will utilize R410A refrigerant.

Administration Area

The Administration (Admin) area will be conditioned by variable refrigerant flow (VRF) DX system. It will be comprised of outdoor condensing units mounted on the roof and indoor fan coil units. The system will incorporate heat recovery to save energy by transferring heat from zones requiring cooling to zones requiring heating. There will be eight condensing units on the roof ~~and they~~, all of which will utilize R410A refrigerant.

Ventilation will be provided by an air-cooled packaged DX DOAS unit mounted on the roof. The unit will incorporate an energy wheel to recover energy from the exhaust airstream and precondition the outdoor air.

~~3.3.4.3~~ 3.3.3.3 *Energy Efficiency*

The data center industry utilizes a metric called Power Usage Effectiveness (PUE) to estimate the efficiency of its data centers. ~~The~~For purposes of the Project, its PUE is calculated by dividing the total demand of the data center by the Critical IT load as shown in ~~Section 2.3.3.4~~below. A lower PUE signifies a more energy efficient design than a higher PUE. The Project is expected to achieve an average PUE of 1.20 and a peak PUE of 1.27 based on conformance with applicable local, state, and federal energy efficiency building ~~codes~~code requirements and standards. The Project's peak operation PUE estimate of 1.27 is based on design assumptions relying on reasonably available information and represents conservative assumptions; that is, the hottest day with all server bays occupied and all servers operating at 100 percent capacity. The Project's more realistic PUE, based on annual average site temperatures and less than maximum power loads, will not exceed 1.20. This is significantly lower than the data center industry average PUE of approximately 1.6.

The Project will be built in accordance with applicable provisions of the current California Green Building Code and will include a number of green building measures to reduce energy consumption ~~including~~such as:

1. limiting mechanical refrigeration needs and lowering the required refrigerant volume, as feasible;

2. utilizing lighting control and energy-efficient lighting to reduce energy usage;
3. building insulation improvements; and
4. incorporating a cool roof design, using reflective surfaces to reduce heat gains.

In addition, the Project will pursue LEED v4 BD+C Gold certification for Data Centers.

~~3.3.4.4~~ 3.3.3.4 *Generating Capacity*

Overview

In order to determine the generating capacity of the Project, it is important to consider and incorporate the following critical and determinative facts.

1. The backup generating facilities will use internal combustion engines and not turbines.
2. The backup generating facilities through software technology and electronic devices will be controlled exclusively by the data center buildings.
3. The backup generating facilities have been designed with a distributed ~~redundant system with a~~ 4 ~~-~~to ~~-~~make ~~-~~3 redundancy~~.~~ system, as described below. Each system of four generators will serve one of the building floors as described in Section 3~~2~~.3.4 below.
4. There will be a total of 8 data center generators which are redundant.
5. There will be a total of 2 ~~admin~~administrative generators (one for each building) to provide electricity during emergencies to support ~~portions~~the administration portion of the ~~admin building~~ buildings and features necessary for emergency response.
6. There will be a total of 2 generators in the water storage tank yard to provide electricity during emergencies to support recycled water treatment and delivery requirements of the cooling of the data center.
7. The backup generating facilities will only be operated for maintenance~~, testing~~ and testing, no more than 50 hour per year per generator engine and during emergency utility power outages.
8. The backup generating facilities will only operate at a load equal to the demand of the data center buildings during an emergency utility outage.
9. The backup generating facilities will only be interconnected to the data center buildings and will not be interconnected to the transmission or distribution grid.

Project Capacity and PUE

Based on the methodology recently adopted by the Commission's Final Decisions Granting SPPEs for the last five Data Center Backup Generating Facilities, the maximum generating capacity of the Project is determined by the maximum ~~of~~ capacity of the load being served.

The design demand of the Project, which the backup generating facilities have been designed to reliably supply with redundant components during an emergency, is based on the maximum critical IT load and maximum mechanical cooling electrical load occurring during the hottest hour in the last 20 years. Such conditions are possible but extremely unlikely to occur. The Project load on that worst-case day will be 97.8 MW.

It is important to understand that the Project will be designed to accommodate the full IT equipment load of the data center facilities. However, in Microsoft's experience it is rare that the total design load is reached. This typically results in data center demand loads of approximately 60 to 80 percent. Therefore, a fully utilized 97.8 MW data center would only reasonably be expected to reach a demand load around 59 to 78 MW.

PUE is calculated by dividing the total demand of the data center infrastructure serving the critical IT spaces (including IT load) by the Critical IT load itself. The theoretical peak PUE for the Worst Day Calculation would be 1.27 (Total 97.8 MW demand of Building[2] on Worst Case Day divided by 76.8 MW Total Critical IT Load). The average annual PUE would be 1.~~2~~20 (Total 92.2 MW demand of Building average conditions divided by 76.8 MW Design Critical IT Load). These PUE estimates are based on design assumptions with the ~~building~~buildings at full capacity and historical weather data.

~~3.3.5~~ 3.3.4 Backup Generating Facilities and Electrical System Design

~~3.3.5.1~~ 3.3.4.1 *Overview*

The emergency backup generators system will include a redundant 4-to-make-3 design topology for the critical IT load. Each floor of each of the buildings will be supported by a set of four diesel~~-~~-fired emergency backup generators. The 4-to-make-3 topology means that the design demand of each floor can be met with only ~~3~~three of the ~~4~~four generators, essentially allowing for each floor to be fully served even if one of the ~~4~~four generators failed.

The emergency backup generators system for the water storage tank yard will include a redundant 2-to-make-1 design topology for the water storage tank yard mechanical loads. The 2-to-make-1 topology means the design demand for the water storage tank yard can be met with only ~~1~~one of the ~~2~~two generators, essentially allowing for the water storage tank equipment to be fully served even if ~~1~~one of the ~~2~~two generators failed.

Main low-voltage (480 Volt) switchboards will be configured with a utility main circuit breaker and generator main circuit breaker. Automatic transfer controls will be provided to facilitate the transfer of the electrical power supply from utility to generator in the event of an undefined number of potential events that could impact PG&E's service (resulting in a loss of power or degradation of power quality). The utility main breaker and generator main breaker are electrically interlocked such that for each main switchboard, only the utility source or generator source can be connected. When the PG&E utility service is outside of pre-determined tolerances, the automatic transfer controls send

[2] Includes electricity for servers, mechanical load, recycled water treatment facilities and cooling load, and ancillary building loads.

a signal to start the generators and perform an open transition (break-before-make) between the utility main breaker and generator main breaker.

Each building's emergency backup generators will be supported by ~~an uninterruptible power supply (UPS)~~a UPS system consisting of a rectifier, batteries, an inverter, and switches to facilitate the uninterrupted transfer during the open transition of electrical power supply from the utility to the generators in the event of an undefined number of potential events that could impact PG&E's service (resulting in a loss of power or degradation in power quality), which triggers the starting of the generators.

The UPS system will include either lithium-ion or valve regulated lead acid (VRLA) battery banks, with each bank capable of providing up to 10 seconds of backup power at 133 percent load and 1 minute of backup power at 100 percent load. The administrative UPS system will include either lithium-ion or VRLA battery banks, with each bank capable of providing up to 10 minutes of backup power at 100 -percent load.

When the electrical source input to the UPS is outside of pre-determined tolerances (+10 or -15 percent of alternating current nominal voltages or a frequency range of 60 Hertz plus or minus 5 percent), the UPS will transfer over to its associated battery source for uninterrupted power to the critical loads while the upstream transfer controls start the generator. The UPS load transfer from PG&E to UPS battery power occurs within 5 milliseconds. Load then transfers from the UPS battery system to the standby generators within 20 seconds of generator start. The UPS inverter conditions the power supply and provides 'clean' utility power for critical loads (IT equipment, fire/security and building management systems, and some small 120-volt circuits).

The major mechanical systems, lighting, and general receptacles are not powered from the UPS sources.

~~3.3.5.2~~ 3.3.4.2 *Backup Generator System Description*

The backup generating facilities will include a total of thirty-six (36) emergency backup generators. Sixteen (16) 3,000 kW critical IT generators and one (1) 500 kW administrative ~~generators~~generator will be located within each building. Two (2) 800 kW generators will be located at the water storage tank yard. The 3,000 kW data suite generators will be Caterpillar Model C175-16, the 500 kW administrative generators will be Caterpillar Model C15, and the 800 kW water storage tank yard generators will be Caterpillar Model C27. The generators proposed for installation are made by Caterpillar, with a ~~certified~~ Tier 4 compliant rating (Tier 2 certified with SCR, DPE and oxidation catalyst). These engines ~~would~~will be equipped with diesel particulate filters (DPF) to reduce the diesel particulates to less than or equal to 0.02 grams/brake horse-power hour (g/bhp-hr), and catalyst systems for the control of NO_x, CO, and VOCs. The control systems result in engine emissions compliance with the EPA Tier 4 standards and with BAAQMD BACT.

The one (1) 500 kW administrative generator located within each building may need to be increased to 800kW later in the Project as part of final design. If this refinement occurs, the two (2) 800 kW

generators ~~will~~would be reduced to 500 kW. To account for this ~~change~~potentiality, the air quality and environmental noise studies conservatively ~~used~~assumed that one 800 kW ~~for all of these~~generator would be located in each building and that both generators in water storage tank yard would be 800 kW.

Specification sheets for each manufacturer are provided in Appendix A-1.

Each individual generator will be provided with its own package system. Within that package, the prime mover and alternator will be automatically turned on and off by a utility-generator PLC transfer controller located in the 480-volt main switchboard located within the data center buildings. Each generator will be controlled by a separate, independent transfer controller. The generator will be turned on if the electrical utility power becomes unavailable and will be turned off after utility power has been restored and the transfer controller has returned the utility to the active source of power serving the computer and mechanical loads within the data center buildings.

As discussed above, all of the critical IT emergency generators will be located in generator rooms located on each floor of ~~the buildings~~each building (See Figures 3.2-2 through 3.2-5). The location of the generators in the water storage tank yard are shown on Figure 3.2-9. The administrative generators will be located on the second floor in the administrative area of each building.

~~3.3.5.3~~ 3.3.4.3 *Fuel System*

The backup generators will use either renewable diesel as primary fuel when available or ultra-low sulfur diesel as a secondary backup fuel if renewable diesel is unavailable (<15 parts per million sulfur by weight). See Project Design Measure PDF GHG-1.2.

Each data center building will have four 50,000-~~-~~gallon underground fuel storage tanks (USTs). Two ~~storage tanks at plan~~USTs will be located north of each building ~~will~~to serve the generators on that side~~. Two~~ of each building. Another two storage tanks ~~at plan~~will be located south of each building ~~will~~to serve the generators on that side. See Figure 3.2-9.

Each 3,000 kW generator serving the Colo Cell (2,400 kW IT load) will have a 500-~~-~~gallon 'Day Tank' that will receive fuel from the USTs to replenish its capacity. The ~~800~~500 kW ~~Admin~~administrative generator will have a 250-~~-~~gallon day tank that will also be served by the USTs. In addition to the fuel day-tanks, each generator will have diesel exhaust fluid (DEF) tanks for emissions aftertreatment.

The two 800 kW generators adjacent to the water storage tanks will be installed in pre-fabricated enclosures with dedicated sub-base 'belly' tanks. Each sub-base tank will have an approximate capacity of 3,500 gallons.

Each fuel tank will be of double-wall construction. The interstitial space will be continuously monitored for leaks. Underground piping will also be of double-wall construction with interstitial leak detection. Upon detection of a leak, the fuel transfer process will be disabled, and an alarm

generated at the building monitoring system ~~to~~ will alert the operations team so that it can be appropriately and promptly remedied.

~~3.3.6 Utility Interconnections and Services~~

~~The Project will include new domestic water, recycled water, fire water, sanitary sewer and fiber interconnections. These services will be made via the installation of new underground pipes and conduit from the Project Site to existing City infrastructure systems. All of the existing City infrastructure is located within existing public roadways. Offsite Infrastructure areas are immediately adjacent to the Project Site in Orchard Parkway except for the recycled water pipeline proposed interconnection which is described below.~~

~~3.3.6.1 3.1.1.1 *Recycled Water Pipeline*~~

~~Recycled water will be used to serve the Project for landscaping and cooling purposes. There is no existing recycled water service to the Project Site.~~

~~The new underground recycled water pipeline will be connected to the existing recycled water main at the intersection of Montague Expressway and Kruse Drive in the City of San José. From there, the proposed main extension will continue south on Montague Expressway, turn southwest onto Trimble Road, and then turn south onto Orchard Parkway towards the Project Site. This route will require approximately 1.5 miles of new recycled water main all within public rights ways and/or existing paved roadways.~~

~~Please reference Figure 3.2-10 - Proposed Recycled Water Extension for a visual depiction of the proposed route.~~

~~3.3.6.2~~ 3.3.4.4 *Electrical Distribution Facilities*

As part of the Project, Microsoft will construct a new on-site substation to be connected to PG&E's 115kV electrical distribution system. The on-site substation will be owned and operated by Microsoft. Interconnection of the new on-site substation to the PG&E distribution system will be through a new PG&E-owned and -operated switching station. ~~The new switching station will be located immediately adjacent to the onsite substation and will be designed and constructed to applicable PG&E standards.~~

The new PG&E on-site switching station will be located immediately adjacent to the on-site substation and will be designed and constructed to applicable PG&E standards. The proposed PG&E switching station will be within the project site boundary and will encompass approximately 82,000 square feet. The proposed switching station will interconnect the new PG&E distribution system to the existing PG&E Trimble Substation and the existing PG&E Newark Substation.

The new switching station will be configured in the breaker-and-a-half arrangement with two bays of three breakers each. Two sets of overhead ~~ACSR~~aluminum conductor steel-reinforced cable (ACSR) conductors will interconnect the PG&E switching station with the Microsoft substation. The switching station will have direct ~~public~~ access from Orchard Parkway.

PG&E metering equipment will be constructed in the Microsoft substation with manual disconnect on the line and load sides of the equipment. In addition, a PG&E meter and relay building will be

constructed near the metering equipment. This building will be adjacent to the Microsoft substation and will have direct access from a public ~~access~~right-of-way.

The new Microsoft substation will consist of two 115kV-34.5kV step-down transformers to provide fully redundant electrical distribution to the data center buildings. Each transformer will be protected by a primary breaker and a secondary main breaker in the 34.5kV switchgear located within the substation. The new Microsoft substation will encompass approximately 50,000 square feet.

~~3.3.7~~ 3.3.5 Landscaping

The Project proposes to remove ~~(19) nineteen~~approximately eighteen (18) on-site trees~~, (11) eleven~~ (located within the City of ~~them being~~San José), ten (10) of which are ordinance size pursuant to the City of San José Tree guidelines as defined by San José Ordinance Title 13 (Streets, Sidewalks and Public Places), Chapter 13.28 (Tree Removal Controls).

Additionally, three (3) street trees will be removed to allow for site access along Orchard Parkway. As part of the right-of-way improvements along Orchard Parkway, the city may require the remaining ten (10) street trees to be removed and replaced in new tree wells installed in the proposed sidewalk, for a potential total of thirteen (13) removed street trees. No trees would be removed in the ~~Off-Site~~paved portions of the Infrastructure Improvement Areas~~, which are located within existing right of way~~.

The trees that are removed will be mitigated pursuant to applicable City standard mitigation requirements with new trees on site as part of the landscape design and as summarized in the table below.

Table 3.3-1: Tree Removal and Replacement

Tree Removal				
	Circumference	Quantity Removed	Replacement Ratio – Size	Replacement Quantity Required
Total Native Trees to be Removed	<19 inches	2	1:1 – 15-gallon*	2
	19-38 inches	4	3:1 – 15-gallon	12
	>38 inches	~~10~~9	5:1 – 15-gallon	~~50~~45
Total Non-Native Trees to be Removed	<19 inches	1	1:1 – 15-gallon	1
	19-38 inches	1	2:1 – 15-gallon	2
	>38 inches	1	4:1 – 15-gallon	4
Tree Replacement				

Total Trees Required to Meet Replacement Requirements (approx.)	~~71~~66 (15-gallon)
Total Proposed Trees (Not Including Street Trees) (approx.)	~~155~~150 (15-gallon)
* A 24-inch box tree = two 15-gallon trees	

The removal and replacement of street trees will require coordination with the San José Department of Transportation and the City Arborist. Please see Section 5.2.1 below for a discussion of the site trees and City of San Jose requirements. PDF BIO-4.1 has been proposed to ensure compliance with the applicable City of San Jose requirements.

The landscape design will consist of climate adaptable trees, large and medium shrubs, and groundcovers that will be installed along the property boundaries, building perimeters and landscape beds distributed throughout the Project Site. Stormwater treatment facilities will be planted with vegetation recommended in the Appendix D section of the C.3 Stormwater Handbook. Trees will be planted pursuant to the applicable City of San José recommended utility clearances, five feet away from underground utility lines, utility cabinets, and fire hydrants, and ten feet away from sewer lines, storm drain lines and commercial driveways, and twenty feet away from streetlights and stop signs.

~~3.3.8~~ 3.3.6 Stormwater Controls

The San Francisco Bay Regional Water Quality Control Board (RWQCB) has issued the Municipal Regional Stormwater NPDES Permit (MRP) to regulate stormwater discharges from municipalities and local agencies. Under Provision C.3 of the MRP, new and redevelopment projects that create or replace 5,000 square feet or more of impervious surface area are required to implement site design, source control, and Low Impact Development (LID)-based stormwater treatment controls to treat post-construction stormwater runoff. LID-based treatment controls that will be incorporated as part of the Project are intended to maintain or restore the Project Site's natural hydrologic functions, maximizing opportunities for infiltration and evapotranspiration, and using stormwater as a resource (e.g. rainwater harvesting for non-potable uses). Examples of C.3 LID measures include bioretention areas, flow-through planters, and subsurface infiltration systems.

The Project proposes to construct stormwater treatment areas consisting of multiple LID ~~(Low Impact Development)~~ bioretention areas and flow through planters totaling approximately ~~26,026~~31,000 square feet, based on preliminary impervious surface calculations, sized according to the applicable requirements of the MRP. Other areas of the Project Site will be landscaped with self-treating or self-retaining areas. The stormwater treatment areas will be located adjacent to site roadways, in landscape areas adjacent to sidewalks, buildings, and other impervious surfaces, and around the perimeter of the Project Site.

In the existing condition, the Project Site is currently undeveloped and there do not appear to be any existing on-site drainage facilities. The Project Site is dirt and vegetation, so it is assumed that the majority of stormwater infiltrates into the soil. The lowest portion of the Project Site is along Orchard Parkway at the northern property line, so any runoff from larger storm events would release from the Project Site at this point.

The proposed Project will install ~~a~~three new ~~24" ~~storm drain ~~lateral near~~laterals on the ~~center of the~~Project Site's Orchard Parkway frontage. ~~This~~These proposed ~~lateral~~laterals will tie into ~~an existing manhole on ~~the existing 96" main that runs along Orchard Parkway. All runoff from the Project Site is anticipated to discharge into ~~this lateral~~these laterals after passing through the appropriate C3 treatment measures (bioretention areas, flow through planters and self-retaining areas).

Downspouts for the roof drainage will discharge directly into bioretention areas, or indirectly into bioretention areas through the use of bubbler systems. In some cases, roof drainage will be piped under sidewalks and discharged to the pavement surface where stormwater will then surface flow to at-grade bioretention planters located along the perimeter of the Project Site.

Proposed bioretention areas will not have impermeable liners separating the bioretention soils from the underlying native soils. Therefore, stormwater will have an opportunity to infiltrate into the ground once it enters the bioretention areas. Perforated underdrain systems will be included in the bioretention areas to allow water that does not infiltrate through the bottom of the bioretention ~~a~~ path to the public storm drain system. Overflow risers will also be included in bioretention areas to allow storm events larger than the C3 design storm to bypass the bioretention and enter the public storm drain system directly.

According to Appendix E-2, HMP Applicability Map, of the "C.3 Stormwater Handbook" published by the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) the Project Site is located in a "red area", defined as catchments and subwatersheds greater than or equal to 65% impervious. According to the MRP, hydromodification controls (HMC) are not required for projects located in red areas of the HMP Applicability Map. Therefore, the Project will not incorporate HMC into the Project's development.

~~3.3.9~~ 3.3.7 Flood Potential

Flood elevations and requirements for the Project Site are given by two separate entities, FEMA and the North San José Flood Management Policy (NSJFMP~~).~~), as the Project Site is located within the boundaries of the NSJFMP. NSJFMP flood elevations are more restrictive, so they will govern the site design.

Based on the FEMA Flood Insurance Rate Map (FIRM), most of the Project Site lies within flood zone "X" defined as an area with 0.2 percent annual chance flood hazard. A portion of the Project Site lies with flood zone "AH" with a given base flood elevation of 27'.

~~The Project Site is also within the boundaries of the North San José Floodplain Management Policy (NSJFMP). The flood~~Flood elevations from ~~this policy~~the NSJFMP vary between 29' and 31' for the Project Site.

Since these flood elevations are higher than those given by the FIRM, they govern the building finish floor elevations which are to be set at least ~~1'~~1 foot higher than the flood elevation. In addition, the NSJFMP requires that a minimum of 25% of the Project Site be at a lower elevation than the existing back of walk for any section through the Project Site taken perpendicular to the flood conveyance path (generally perpendicular to North 1st Street).

To comply with this requirement, the finished grades of approximately the westernmost third of the Project Site will be graded to not exceed the existing back of walk elevation, essentially maintaining existing topography. This means that the western portion of the Project Site ~~site~~ will act as a flood conveyance path extension of Orchard Parkway and will allow for shallow floodwaters to pass through the Project Site.

~~3.3.10~~ 3.3.8 Southern Bike Trail Extension

The Project will include the creation of a Class I bike path along and within the Project's southern property line. This bike ~~path~~trail will extend from the intersection of Orchard Parkway and Component Drive to edge of the Project Site's southwestern property line near the existing Guadalupe Bike Trail ~~on the existing levee~~ as shown on Figure 3.2-11 – Bike Path Study. This Class I bike ~~path~~trail will help facilitate achievement of the planned regional Guadalupe Bike Trail~~.~~

~~It is anticipated that the final interconnection~~ by installation of this ~~regional trail (which is not on land owned by Microsoft) from the Project Site's southwest property line to the Guadalupe Bike Trail will be made in the future by those with the authority over the levee property between the Guadalupe Bike Trail and Project Site in adherence with all applicable laws and regulations.~~segment.[3]

3.3.9 Offsite Infrastructure Areas

As described more fully below, the Project involves the installation of ~~off-site~~offsite utility infrastructure and potential intersection improvements to serve the Project. These improvements will be located within the Offsite Infrastructure Areas. The total amount of off-site ground disturbance as a result of installation of the proposed Offsite Infrastructure Improvements is estimated to be approximately 42 acres. Of the estimate of approximately 42 acres of total disturbance from work that is offsite, approximately 2acres is estimated for the Recycled Water Pipeline (described in Section 3.3.9.2), minor utility interconnections from the Project Site boundary to the existing sewer,

[3] Final interconnection of this regional trail (which is not on land owned by Microsoft) from the Data Center Site's southwest property line to the Guadalupe Bike Trail may occur in the future as part of a separate project pursued by those with the authority over the levee property between the Guadalupe Bike Trail and Data Center Site in adherence with all applicable laws and regulations.

water and storm water infrastructure located within Orchard Avenue (described in Sections 3.3.9.1), and the potential improvements at the intersection of Orchard Avenue and Trimble Road (described in Section 3.9.3). The PG&E Reconductoring Activities will take place within the existing regional transmission line easement currently accommodating several large regional transmission lines. As described in Section 3.4 below, the specific locations of ground disturbance is not yet available from PG&E and therefore the area of ground disturbance has been conservatively estimate to occur anywhere within the easement area, when the actual disturbance area will confined to only those electrical cable pull-sites and staging areas and those areas where existing poles or towers may need to retrofitted or replaced. The conservative estimate is approximately 40 acres and for purposes of the CEQA analysis when added to the estimates from the other Offsite Infrastructure Areas and rounding up, the total disturbance acreage is estimated to be approximately 42 acres

Detailed descriptions of the Project features that will be constructed in the Offsite Infrastructure Areas are provided below. The PG&E Reconductoring Activities is described in Section 3.5

3.3.9.1 *Water, Sewer, and Fiber Underground Interconnections*

The Project will include new domestic and fire water, sanitary sewer and fiber interconnections. These services will be made via the installation of new underground pipes and conduit extending from the Project Site Boundary to existing City infrastructure systems within Orchard Avenue. All of the existing City infrastructure is located within existing public roadways

3.3.9.2 *Recycled Water Pipeline*

Recycled water will be used to serve the Project for landscaping and cooling purposes. There is no existing recycled water service to the Project Site. The Project will include the construction of a new recycled water pipeline extending from the Project Site to the existing recycled water main at the intersection of Montague Expressway and Kruse Drive in the City of San José. Specifically the pipeline route will start at the intersection of Montague Expressway and Kruse Drive and will continue south on Montague Expressway, turn southwest onto Trimble Road, and then turn south onto Orchard Parkway towards the Project Data Center Site. This route will require approximately 1.5 miles of new recycled water main all within public rights ways and/or existing paved roadways.

Please reference Figure 3.2-10 - Proposed Recycled Water Extension for a visual depiction of the proposed route.~~As an additional community benefit, the Project anticipates working collaboratively with the San José Department of Public Works to confirm Microsoft's willingness to make a financial contribution towards the planned Class IV separated bike path within the existing right of way along the Project Site's frontage on Orchard Parkway.~~

~~3.3.11~~ 3.3.9.3 *Trimble and Orchard Intersection Improvement*

In preliminary discussions with staff from the Development Services Division of the City of San José Public Works Department, staff anticipates that the City will seek to impose a Condition of Approval as part of the Project's ~~Special~~Conditional Use Permit requiring the Project to improve both the southwest and southeast corners of the Trimble Road and Orchard Parkway intersection. ~~Given the foregoing, the Project has incorporated this improvement as part of the project.~~[4]

~~The improvement to the intersection corners will consist of~~Given the foregoing, the Project has incorporated this improvement as part of the Project and will be considered in the Project's CEQA analysis.[5]

~~removal of the existing pedestrian refuge (pork chop) islands at the southwest and southeast corners. Removal of these~~The intersection improvements will consist of the removal of the existing pedestrian refuge ('porkchop') islands ~~will require a~~at the southwest and southeast corners of the intersection, relocation of the existing traffic signal poles from the refuge islands, and the modification of the existing traffic signal ~~to relocate the existing poles from the pedestrian refuge islands.~~system.

~~It is important to recognize these~~These improvements will not be required as a mitigation pursuant to CEQA to offset ~~design elements of~~any identified impacts associated with the Project. Rather, the City and other local agencies often ~~conditions~~condition development projects outside of the CEQA process to make improvements to the City street network to provide what the City views as operational improvements to vehicular and pedestrian safety in the area of a project.

3.4 CONSTRUCTION AND OPERATION

3.4.1 Site Grading, Excavation, and Construction Phasing

Site grading, excavation and construction may either be conducted in two phases with a separation of activities between Phases I and II (Phased Construction Scenario), or the entire Project conducted continuously (No Phase Scenario).

[4] ~~However, it is important to note the City is also including this same Condition of Approval on the Site Development Permit (file H22-021) associated with the property at the southwest corner of West Trimble Road and Orchard Parkway (the property immediately north of the Project). The City has stated that construction of these intersection improvements will be the responsibility of whichever project's building permit is approved first, subject to a pro rata fair share apportionment of costs. Therefore, for purposes of a conservative analysis, the Project's CEQA document will incorporate these improvements as a Project Design Feature.~~

[5] However, it is important to note the City is also including this same Condition of Approval on the Site Development Permit (file H22-021) associated with the property at the southwest corner of West Trimble Road and Orchard Parkway (the property immediately north of the Project). The City has stated that construction of these intersection improvements will be the responsibility of whichever project's building permit is approved first, subject to a pro rata fair share apportionment of costs. Therefore, for purposes of a conservative analysis, the Project's CEQA document will incorporate these improvements as a Project Design Feature, though the improvements may actually be pursued by the sponsor for the neighboring project.

3.4.1.1 *Phased Construction Scenario*

The Phased Construction Scenario will take place in two phases. Phase I will include grading of the entire Project Site; installation of all on-site utility services including interim power; construction of the on-site substation, PG&E ~~switchyard~~switching station, and ~~off-~~on site transmission lines; construction of the recycled water pipeline, storage tanks and treatment facilities; construction of potable and sewer interconnections; paving the roadways and parking for the ~~SJ04~~first building (SJ04); and construction of the ~~SJ04~~first b~~B~~uilding. Phase II will include completing the paving for the parking and construction of on-site utilities for the ~~SJ06~~second building (SJ06) and construction of the ~~SJ06~~ second b~~B~~uilding.

Phase I activities are anticipated to begin in ~~April 2024~~January 2025 and take approximately 25 months to complete. Phase I will include a construction workforce with a peak number of workers of approximately 84 per month and an average of approximately 51.1 per month. Phase II construction will begin as soon as commercially feasible, likely in ~~2026~~2027 and take approximately 25 months to complete. Phase II construction workforce is estimated to have a peak number of workers of approximately 50 per month with an average of approximately 30.8 per month.

3.4.1.2 *No Phase Construction*

It is possible that that entire Project would be constructed without phasing. For this scenario, construction is anticipated to begin in January 2025 and would take approximately 50 months to complete. The construction workforce is estimated to have a peak number of workers of approximately 84 per month and an average of approximately 51.1 per month.

3.4.1.3 *Construction Worker Parking and Stating Areas*

Construction worker parking and staging areas will be off-site at an existing commercial property parking lot located at 2825 Lafayette Street, approximately 1.9 miles from the Project Site. Bus transportation between the Project Site and the off-site parking will be provided by the Project.

3.4.1.4 *Export Material*

[For purposes of this analysis and based on reasonably available information, it is conservatively assumed that up to ~~90,000~~106,067 cubic yards of soil and undocumented fill will be removed from the Project Site including potential soil remediation export (if required). and disposal of excess soils associated with construction of the Recycled Water Pipeline. Grading for ~~of~~ the Project ~~Site~~ is not ~~expected~~anticipated to require the import of fill material. ~~Offsite~~Other I~~i~~nfrastructure I~~i~~mprovements are not anticipated to ~~not~~ require exportation of fill material. PG&E's Reconductoring Activities (as described below) are not anticipated to require exportation of fill material.

3.4.1.5 *Excavation Depths*

On-site utility trenching is expected to vary between 4 and 15 feet deep. The buildings will use a deep foundation system with piles. The piles are anticipated to extend approximately 80 feet below

the existing grade surface. Off-site trenching for the Rrecycled Wwater Ppipeline is expected to be approximately 5 feet deep.

3.4.2 Site Water Supply and Use

Site Grading and Construction. Grading and construction of the Project is estimated to utilize approximately 1.75 acre-feet of water over the 25-month construction period for Phase I for the SJ04 building and related improvements and a similar approximately 1.75 acre-feet of water over the 25-month construction period for Phase II for the second SJ06 building and related improvements. For the non-phased constriction scenario it is estimated that the Project could use up to approximately 3.5 acre-feet over the 50 month construction period.

Operation. The Project will require recycled water during most of the year to cool the buildings via the adiabatic cooling system. The data center will be designed to use up to a total of approximately 680 acre-feet per year (AFY) of recycled water for mechanical cooling and approximately 10.2 acre-feet per year (AFY) of recycled water for site irrigation from South Bay Water Recycling (SBWR). On-site recycled water storage tanks will be installed as a back-up water source when recycled water is not available from the utility. The projectProject is estimated to use approximately 1.35 AFY of potable water.

A Water Supply Assessment (WSA) pursuant to SB 610 requirements was completed for the Project in August 2022 (refer to Appendix J). The WSA determined that sufficient potable and recycled water supplies are available to serve the Project.

3.4.3 Waste Management

Construction- and demolition-related wasteswaste, similar to construction and demolition for comparable projects, will be generated, managed, and disposed of consistent with applicable laws and regulations, as described in Sections 4.9 and 4.19. Given the data center nature of the proposed uses, significant quantities of waste materials would not be generated during operation of the Project.

The primary waste from the Project will be clear water discharge from indirect evaporative heat rejection equipment on the roof (fluid coolers). Recycled water will be used for evaporative heat rejection when the ambient conditions are not conducive for sensible heat rejection.

The recycled water will be recirculated and sprayed on the wet coils of fluid coolers. A portion of the spray water will continuously evaporate as the data center heat is rejected at the fluid coolers. This evaporation process increases the mineral content in the recirculated spray water. Excessive mineral content can have a negative impact such as scaling of the fluid cooler heat transfer surfaces. A portion of the spray water will be continuously discharged to the sanitary system (blowdown) and replaced with recycled water to alleviate this condition.

Makeup water = Evaporation + Blowdown (neglecting drift). The ratio of makeup water to blowdown is called cycles of concentration (CoC). CoC can also be defined as the ratio of total dissolved solids (TDS) concentration or conductivity of recirculated spray water to the TDS or

conductivity of recycled water. Based on quality of recycled water, the Project design will be based on CoC of 4.

The San José Public Works Department has evaluated the calculated clear water discharge and has confirmed that the existing sanitary pipe that will serve the Project and the overall sanitary system has the capacity to serve the calculated load. See City Correspondence in Appendix K.

3.4.4 Hazardous Materials Management

The Project will prepare a Spill Prevention, Control and Countermeasure (SPCC) Plan pursuant to applicable laws and regulations to address the storage, use and delivery of renewable diesel and diesel fuel for the generators.

Diesel fuel will be delivered on an as-needed basis in a compartmentalized tanker truck with maximum capacity of 8,500 gallons.

For the bulk fuel storage tanks serving the buildings, the tanker truck will park on the access road located just above the underground fuel storage tank along the northwest and southeast sides of the buildings and will connect a fuel fill hose to a fill port located in the ground just above the underground fuel storage tank.

For the fuel storage tanks located in the base of the two generators located in the tank area, the tanker truck will park near the generators and will extend a fuel fill hose through ~~a~~ hinged openings in the security fence surrounding the tank area.

There are no loading/unloading racks or containment for re-fueling events; however, a spill catch basin will be located at each fill port at the bulk underground diesel storage tanks and for the base mounted diesel storage tanks. To prevent a release from entering the storm drain system, storm drains will be temporarily blocked off by the truck driver and/or facility staff during fueling events. Rubber pads or similar devices will be kept in the generation yard to allow quick blockage of the storm sewer drains during fueling events.

To further minimize the potential of diesel fuel coming in contact with stormwater, to the extent feasible, fueling operations will be scheduled at times when storm events are improbable.

Warning signs and/or wheel chocks will be used in the loading and/or unloading areas to prevent vehicles from departing before complete disconnection of flexible or fixed transfer lines. An emergency pump shut-off will be utilized if a pump hose breaks while fueling the tanks. Tanker truck loading and unloading procedures will be posted at the loading and unloading areas.

~~Urea or~~ Diesel Exhaust Fluid (DEF) is used as part of the diesel engine combustion process to meet the emissions requirements. ~~Urea~~ DEF will be stored in two (2) 55-~~-~~gallon storage drums located within the outdoor generator enclosures ~~and within~~in the ~~interior generator rooms. These drums~~water storage tank area. DEF storage will be filled in place from ~~other drums, totes, or bulk tanker truck~~

~~at~~a fill port on the ~~tank top or swapped out for new using quick connection fittings at~~outside of the ~~tank top~~generator enclosure.

DEF will be stored in a 550-gallon storage tank located adjacent to each generator for the generators installed within the buildings. Fill ports will be located at the exterior of the buildings and will connect to a tank fill systems located in four locations within the buildings.

3.4.5 Backup Generating Facilities Operation

The backup generators will be run for short periods for testing and maintenance purposes and otherwise will not operate unless there is a disturbance or interruption of the utility supply. BAAQMD's Authority to Construct and the California Air Resources Board's Airborne Toxic Control Measures (ATCM) limits each engine to no more than 50 hours annually for reliability purposes (i.e., testing and maintenance), and the Project will adhere to the foregoing requirements.

3.4.5.1 *Routine Maintenance and Testing Schedule*

Annual, quarterly and monthly functional tests will be performed on each generator to verify that the generators are functioning properly. For the annual test (performed once per calendar year), each generator will be run at 100% load on a load bank test unit for approximately 2 hours. For the quarterly test (performed three times a year), each generator will be run at 100% load on a load bank test unit for approximately 30 minutes. For the monthly test (performed eight times a year), each generator will be run unloaded for less than 30 minutes. Routine maintenance will be performed during the annual and quarterly test events.

3.4.5.2 *Emergency Operations*

In addition to running the generators for routine maintenance and periodic testing, as described in the previous section, the generators will run when power is interrupted from PG&E.

The Project will derive power from the PG&E Trimble Substation and the PG&E Newark-Lawrence Substation. The Project will not experience an interruption of power as long as ~~one~~either of the two substation sources is available.

Over the last 10 years, the PG&E Trimble Substation has recorded the following power outages:

Outage Date	Start of Outage	Duration of Outage
02/04/18	01:42PM	103 Minutes
04/04/18	02:43PM	60 Minutes

Source of Information: PG&E internal records.

Over the last 6 years, the PG&E Newark-Lawrence Substation has recorded the following power outages:

Outage Date	Start of Outage	Duration of Outage
03/11/16	12:14PM	19 Minutes
12/22/16	05:11PM	24 Hours 21 Minutes
04/15/17	12:11PM	108 Minutes
07/08/17	09:01AM	1 Minute
09/27/17	09:06AM	75 Minutes
01/18/20	04:11PM	81 Minutes
08/16/20	07:29AM	1 Minute
06/13/21	12:19AM	31 Minutes

Source of Information: PG&E internal records.

Based on this information, the Project would not have experienced a utility power interruption over the last 10 years because one of the two substation sources of power have been available during this time. If this pattern were to hold true for first 10 years of the Project's operation, it is not expected that the backup generating facilities would be required to run due to a utility power outage. Therefore, emergency operation of the emergency generator facilities is anticipated to be infrequent and is not foreseeable.

3.5 PG&E RECONDUCTORING ACTIVITIES

In order to timely supply the electricity for the needs of the Project, PG&E has determined that upgrades to its existing electrical transmission network are necessary. Specifically, PG&E has identified an approximately 12-mile portion of the existing 115 kV power line between Newark Substation and Trimble Substation that will require reconductoring. Although detailed design has not been completed, it is likely that PG&E will also determine the need to replace or modify individual structures along this line to support the heavier conductors. Reconductoring Activities are herein treated as part of the Project for purposes of CEQA review. It is important to note that to avoid potentially sensitive cultural resources, PG&E has provided Figure 3.3-15, to show that no work will be performed within the identified areas and flagging will be used as necessary for work near the identified areas to protect the resource. Figure 3.3-15 will be submitted under separate cover pursuant to a Request For Confidentiality.

3.5.1 Existing Newark-Trimble 115 kV Power Line

PG&E's Newark-Trimble 115 kV Power Line is located in established transmission corridors within the Cities of Fremont, Santa Clara and San Jose. The vast majority of the line, which is co-located on the same structures with a second line (circuit), is located adjacent to one or more other single- and double-circuit transmission lines as shown on Figures 3.3-16 and 3.3-17. A portion of the line crosses

a creek, river and other bay-related water features and salt marsh. Another portion of the line is within a highly urbanized environment.

The Newark-Trimble 115 kV Power Line extends from PG&E's existing Newark Substation, located west of the intersection of Auto Mall Parkway and Nobel Drive in the City of Fremont, to the Trimble Substation located at 44467 Component Drive in the City of San Jose. The line is entirely above ground and supported on lattice steel towers or steel monopole structures referred to as tubular steel poles (TSPs).

The existing 115 kV line leaves the Newark Substation to the south and then travels east in a transmission corridor with other, parallel transmission lines. The transmission lines are supported on lattice steel towers located approximately 800-1000 feet apart. The Newark-Trimble line is the northerly of the two lines. Both lines turn to the southeast and cross Coyote Creek, where they turn directly south. The Newark-Trimble line is located to the east of the other existing double-circuit transmission lines. The lines again cross Coyote Creek and enter Santa Clara County, cross a body of water into the City of San Jose, and bear to the southwest eventually running parallel to Grand Boulevard. The two lines separate on the north side of the Guadalupe River near the Guadalupe Trail, where the Newark-Trimble 115 kV line bears slightly to the east and crosses the Guadalupe River. The line then continues southwesterly across a railroad line with a sharp turn to the southeast near America Center Court.

At this turn, the 115 kV Newark-Trimble line joins another double-circuit electric line located to its south and is supported on TSPs. The line runs parallel to the southern side of an existing railroad line and Lafayette Boulevard and continues southeasterly across State Route 237. The line makes a sharp turn to the southwest at Silicon Valley Power (SVP) Northern Receiving Station. The line travels along the southern end of the SVP Northern Receiving Station in a transmission corridor and, at the southwestern corner, turns sharply to the southeast. This portion of the line is in a transmission corridor within a residential area and is supported on lattice steel towers. The line crosses Montague Expressway and then turns northeast just south of the intersection of Norman Avenue and Leonard Court in an industrial parking lot. The line continues northeast within Laurie Avenue and then in a dedicated transmission corridor until it crosses De La Cruz Avenue, where it turns sharply to the southwest. The line continues within Edward Avenue until it crosses the Guadalupe River and West Trimble Road, continuing across the southwestern portion of the Project Site. The line turns sharply to the northeast at the southwest corner of the Project Site. The line continues northeast supported on TSPs located in an existing parking lot and through Component Drive, past Orchard Parkway, until it turns into the south side of Trimble Substation.

3.5.2 Description of Reconductoring Activities

The design work to reconductor the 115kV Newark-Trimble Line is ongoing and will include estimating the loads from the new conductor as well as the capacity of the existing towers and poles to handle those loads based on the latest design criteria. This may mean that some of these towers and poles will need to be modified or replaced. PG&E will replace the existing 715 all aluminum conductor (AAC) with a higher-capacity conductor. Preliminary analysis based on reasonably available

information indicates that the existing structures may be able to support the new conductor. Based on the foregoing, for purposes of a conservative analysis, the following is a description of the assumed activities and steps that PG&E would likely employ to accomplish the reconductoring and thus will be included in this project description for purposes of conducting the Project's CEQA analysis. For purposes of this analysis, we have assumed that an area 200 feet long by 100 feet wide around each support structure could be disturbed. The total estimated disturbance is therefore approximately 40 acres.

3.5.2.1 *Guard Structures*

Temporary wood poles will be used as guard structures at locations where they are required, typically at busy road crossings, trails, or other utility lines. Guard structures typically consist of a pair of temporary vertical wood poles that are directly buried with a horizontal cross-arm and netting. Guy wires may be installed to provide tension support for netting. Guard structures are installed as a safety precaution to prevent the conductor from falling to the ground if it is dropped or sagged excessively during reconductoring. The wood poles for guard structures are typically approximately 30 - 50 feet above ground and are buried approximately 5 - 7 feet below ground.

In lieu of installing temporary wood poles as guard structures, bucket or line trucks may be staged at crossings to hold the conductor, prevent it from falling, minimize ground disturbance, or to accommodate other construction-related needs.

The guard structure designed for the State Route 237 crossing will include netting to provide additional protection against falling or sagging conductor. The poles used for netted guard structures will be guyed for stability. It is anticipated that a combination of temporary lane closures and rolling breaks will be required to install the nets onto the guard structures.

To prevent the conductor from sagging onto other utility lines or roads, temporary guard structures will be installed as needed at crossings of electric lines, recreation trails, and roadways. Two, 2-pole or 3-pole guard structures with netting will be placed on each side of SR 237. When netting is used, temporary guy wires will be installed to support the additional load on the wood pole structures. Equipment needed to install the wood poles will likely operate from existing disturbed areas, such as road shoulders. It is estimated that installation of each guard structure pole will disturb approximately 100 square feet, accounting for the augured diameter plus stockpiled spoils. Guard structure poles will be installed in disturbed roadsides or developed areas where possible. K-rail will be placed along SR 237 shoulders to isolate the guard structures from vehicle traffic. Construction personnel will be stationed at trail crossings to temporarily hold or redirect recreationists to prevent contact with conductor during pulling operations.

3.5.2.2 *Snub Poles*

Snub poles are temporary wood poles used to facilitate pulling operations. Approximately two temporary snub poles may be required at each pull site where the conductor cannot be attached directly to the structure because of structure design. Snub poles typically extend approximately 30 - 50 feet

aboveground and approximately 5 - 7 feet below ground. Snub poles will be removed upon completion of each wire pull.

3.5.2.3 *Line Replacement*

During reconductoring activities, the existing power lines will be taken out of service. To replace a conductor with a new conductor, the existing conductor will be detached from its support structure and temporarily lifted. Rollers then will be installed at the conductor's attachment point and the conductor will be placed onto the rollers. The rollers will allow the existing conductor to be pulled through each structure until the new conductor is ready to be pulled up to the final tension position. Installing rollers and detaching the existing conductor may be accomplished using a helicopter, line trucks, bucket trucks, or other equipment.

A sock line will then be attached to the existing conductor, and a line truck with a drum puller and empty conductor reel will pull the old conductor onto the reel where it will be collected for salvage. The pulling through each structure will be done under controlled tension to keep the conductor elevated and away from obstacles. As a safety precaution, guard structures will be placed where the conductor crosses public roads, recreations trails, or other utility lines to prevent injury or damage if the conductor were to inadvertently fall.

Reel stands mounted on a line truck will feed the new conductor along the rollers at each structure while maintaining tension in the line to prevent contact with the ground or other obstacles. After the conductor is pulled into place, conductor sags will be adjusted to required tensions. This sequence will occur three times per circuit, once per conductor phase. The conductor will then be clamped to the end of each new insulator as the rollers are removed, and new vibration dampers and other accessories will be installed.

3.5.2.4 *Potential Tower and Pole Replacements on Land*

If structures located on land must be replaced, they will be installed with typical ground-based equipment, such as cranes, flatbed trucks, and line trucks, and possibly helicopters. Structures will typically be delivered to the work site in sections by tractor-trailer and assembled at ground level using a crane and cribbing.

Tower installation: If new towers must be installed, they will likely be installed using the drilled pier method. Each tower will require four foundations. Drilled pier foundations will have a diameter of approximately 6 feet and will range between approximately 20 and 30 feet deep. This technique will require an area of approximately 100 by 100 feet (0.3 acre) at each location. Matting will be used to provide both a stable work area and access to the work area, as needed. A drilled foundation is constructed by boring a hole into which concrete is poured and anchor bolts are set. Excavation for the foundation for each leg will take approximately 2 days per tower leg if conditions are dry (eight days total per tower), or three to four days per tower leg if groundwater is encountered (14 days total per tower). Drilling fluids will be disposed of using a mud recycler. Excess spoils will be hauled off site for disposal or used elsewhere on the project as fill, as appropriate. If dewatering is necessary during excavation, water will be discharged to the surface in compliance with applicable regulations

or discharged to a portable tank or other container and disposed off-site in compliance with any applicable state and federal regulatory standards.

TSP installation: If new TSPs are required, the holes will measure approximately 6 feet wide and 30 feet deep. Excavated soils will be feathered in around the pole site and stabilized. A plastic sleeve may be placed in the hole to prevent cave-in; the plastic sleeve will not be removed prior to pole installation. Plywood and plastic coverings will be used to cover the excavated holes until pole installation activities begin.

The holes for TSPs will typically be drilled and excavated using a crawler-mounted augur. The excavator will set up adjacent to the existing pole and the new pole site. Line trucks mounted with augers will be used where poles are located in or adjacent to pull sites, staging areas, existing access roads, developed property, and where there is relatively level, open terrain.

Although drilled piers are the preferred method for tower foundation it is possible that site specific soil conditions may require installation of piles. In the event piles are required, pile types include wood, steel, and concrete piles. Concrete piles would be cast in place using a hollow steel pile as the casing or form. Installations would occur by helical pile driving, vibratory hammer pile driving, and impact hammer pile driving. Helical pile driving is a relatively new method of pile installation where large piles are screwed into the soil instead of being driven with a hammer. The type of pile installation utilized at each site will be determined by the site characteristics (e.g., soil or substrate type) and/or the availability of pile type.

The majority of the pile-driving activities required for tower repair/replacements and foundation repairs/replacements would occur within muddy, fine materials, and soft habitat that range from clay (very fine) to silt to sand (relatively course). A barge mounted vibratory or impact hammer, or a combination of the two, would be used to drive the piles. A helical pile driver or impact hammer may be utilized to install piles to their final depth. Piles would range from 16 to 72 inches in diameter. When an impact hammer is used, up to 2,000 strikes may occur per day.

When 24-inch diameter piles or smaller are used to repair foundations at a single tower, approximately 16 piles are installed and pile driving would last between 16 and 24 days. When 60-inch diameter piles are used to repair foundations at a single tower, four piles are installed and pile driving would typically take between 6 and 15 days. Installation of 72-inch piles would be similar to 60-inch diameter piles.

Pole sites that are not accessible by vehicles due to the absence of access roads and presence of steep terrain will typically be excavated by hand. Crews and equipment will be transported by helicopter to a nearby clearing or will access the pole site on foot from the nearest established access road. Equipment will include standard digging tools or portable equipment, as well as a compressor and jackhammer. It may be necessary for crews to establish a small pad to stabilize the compressor. Crews will use the jackhammer and other portable equipment to excavate a hole for the new pole.

New TSPs will be set in a concrete-pier foundation. A line truck will be used to place foundation forms, anchor bolts, and rebar. A cement truck will be used to deliver and pour concrete for the

foundation form. Once the concrete has set, the form will be removed and gravel placed around the base. A crane will then be used to install the new TSP on the foundation. After the poles are set, any additional hardware will be added to the cross-arms using a utility terrain vehicle (UTV) with a worker-lift attachment.

Tower removal: Once the existing conductors for both circuits are transferred to the new structures, crews can begin disassembling and removing the existing lattice towers. To remove the top section, a helicopter or crane will be rigged to the top of the tower and sections will be unbolted or cuts will be made at the desired removal point. The structure will be lifted and lowered to the ground where it will be cut into smaller sections and either transported to a laydown area or directly to a recycling facility. To remove the lower section, the legs will be cut off just above the foundations and a boom truck will remove the remaining sections. Existing foundations will be removed, including all concrete and steel, unless cutting them off below ground surface will reduce environmental impacts. The excavation resulting from footing removal will be filled in with soils excavated from the new foundation sites.

3.5.2.5 *Potential Tower Modifications*

Tower modifications may be necessary. If necessary, they may consist of installing Optical Ground Wire (OPGW) peaks to support the new OPGW, cage-top extensions to increase conductor clearance over open water or other structures, and/or structural body modifications to support the additional load from the new conductor. The OPGW peaks are typically 4-1/2 to 6-foot lattice extensions mounted to the top of the tower, and the cage-top extensions are typically 16-foot lattice extensions with cross arms bolted to the top of the tower. The tower body modifications will entail changing out and adding braces to the lower cage portion of the tower.

Installing OPGW peaks and cage-top extensions may be accomplished using a medium-duty helicopter to transport crews and materials to tower locations. The existing towers will be prepared to accommodate the extensions by installing any necessary braces or additional plates at connection points. The OPGW peaks and cage-top extensions will typically be pre-assembled at staging areas and transported to the individual towers by helicopter where crews will bolt the peaks and extensions onto the existing towers. Most of the body modifications will entail changing out and adding braces to the lower cage portion of the tower.

3.5.2.6 *Microwave Towers*

PG&E will likely install two microwave towers to help fulfill the reconductoring project's telecommunication and system protection requirements. One microwave telecommunication tower is proposed to be located at within new PG&E Switching Station to be located on the Project Site and one withinthe existing Zanker Road Substation at the City of San Jose/Santa Clara Regional Water Treatment Facility. The towers will be installed adjacent to the control enclosures at each location. The towers are expected to be approximately 80-90 feet in height and consist of three-leg, self-supporting lattice steel towers on top of 20-foot by 20-foot slab foundations. An approximately 4-foot diameter microwave transmitter will be installed near the top of each tower, connected by communication and

power conduits. Field verification and line-of-sight path surveys may affect the tower dimensions but any changes would likely result in a smaller footprint.

3.5.2.7 *Foundation Improvements*

Foundation work at towers, if necessary, may consist of installing Tubex soil displacement piles adjacent to each existing tower footing. The installation starts with screwing in an approximately 16-inch diameter pile, 80- to 100-feet-deep, using a track mounted drill rig. Steel casing is advanced by the drill rig and grout is injected into the void created by the pile casing as the drill progresses. Once the pile is installed to depth, a steel rebar cage is lowered into the casing and the casing is filled with concrete. Any groundwater that accumulates within the pile casing will be dewatered into a baker tank or equivalent for testing, then disposed of in accordance with the project Storm Water Pollution Prevention Plan (SWPPP) and applicable state and federal laws and regulations. With the Tubex pile system, there are no spoils generated during installation; the soil is displaced laterally and compacted as the drill bit is advanced. No backfill will be needed for this work, and any incidental drill spoils will be stockpiled on plastic for testing, then removed from the Reconductoring Work Areas for transport to an approved disposal facility.

Once the Tubex piles are in place, a horizontal concrete pile cap will structurally tie the new piles to the existing tower footings. The new concrete pile cap will be formed above the ground surface; minor excavation may be required to tie the new piles to the existing foundations.

To provide access and a stable work area around towers in marshlands, access routes and tower work areas will be established by placing timber mats or equivalent protective matting over the ground surface. Towers within marshlands will require approximately 0.3 acre of matted work area around the base of the towers. Limited grading may be needed to establish project work areas and access, but no grading will occur within marshlands.

If water is present when foundation work is planned, it may be necessary to construct a temporary cofferdam around the perimeter of the work area to isolate foundation work from open water. Cofferdams may consist of water-filled bladders (e.g., aqua dams), sandbags wrapped in plastic, or other similar means of controlling water from entering the work area. Once the cofferdam is in place, the work area will be dewatered in accordance with the project SWPPP.

3.5.2.8 *Pull Sites*

When conductors are strung between towers, pull sites are used to raise the conductors to the proper ground clearance height and to the proper line tension. Pull sites will have a footprint of approximately 0.2 - 0.6 acres within previously disturbed or developed areas. A temporary wood pole may be installed at each pull site to serve as a snub pole during reconductoring. Pull sites will be used to stage conductor pulling trucks and conductor reel trucks.

3.5.2.9 *Staging Areas*

Temporary staging areas will be the main base of operations during the reconductoring construction activities and will be used for a variety of purposes, including storage of construction materials and equipment as they arrive on site, as helicopter landing zones, for parking of vehicles and equipment, and as a meeting area for project management and work crews.

3.5.2.10 *Helicopter Use*

Access to several of the towers is difficult due to marshland and open-water habitat; use of a helicopter will facilitate delivery of materials and crews without the need to access every tower from the ground. Helicopters will be used to remove and install the conductors, to set the cage-top extensions and OPGW peaks, and transport laborers and materials to the towers. Two light-duty helicopters (Hughes 500 or similar) may be used to transport crew members and materials, and to remove and install conductors. A medium- or heavy-duty helicopter (Bell Ranger UE205 or similar) may be used to install the OPGW peaks and to install the cage-top extensions. Helicopters will fly directly from the landing zone to the alignment, and will follow the alignment to each tower site unless restricted by neighboring structures or flight paths. At the end of each day, helicopters will return to a local commercial airport or another appropriately equipped facility. Helicopters will not transport loads over roads or habitable structures. Temporary landing zones with designated areas for helicopter take-offs and landings will be established within the staging areas. Dust suppressants or water will be applied, as needed, to control dust at the landing zone. Helicopters are anticipated to primarily refuel at nearby commercial airports; however, a fuel truck may be available at staging areas to support refueling if needed. Spill prevention measures will be in place for any onsite helicopter refueling in compliance with the subject SWPPP.

Construction workers using helicopters are required to be certified for helicopter safety, and must produce a certification card to the pilot before they can fly. Personnel and pilots will attend a daily tailboard meeting at the landing zone that covers safety topics for the day, including the route to be taken and work locations to be visited. Helicopter flight plans will be filed with the local FAA office regulating the local air traffic control plan if required.

3.5.2.11 *Access Roads*

Project work areas will be accessed using a combination of public roads, existing paved and gravel roads, and new matted temporary access routes across marshlands. No new access roads are anticipated to be necessary to complete the Reconductoring Activities, no or minimal grading is anticipated, and no permanent access roads are proposed. Equipment will access tower work areas within marshlands by placing wooden timber mats onto the existing surface to create an approximately 10-foot-wide access route. A combination of matting and steel plates will be utilized to provide equipment access at grade changes (such as when accessing mudflats or marshlands from upland areas).

3.5.2.12 *Erosion and Sediment Control and Pollution Prevention during Construction*

Construction of the Reconductoring Activities will require ground-disturbing activities associated with tower foundation work and establishment of work areas. Because these activities will result in

disturbance of more than one acre, PG&E will be required to obtain coverage under the State Water Resource Control Board (SWRCB) General Permit for Storm Water Discharges Associated with Construction Activity Order No. 2009-0009-DWQ. To obtain coverage under the permit, PG&E will develop and submit permit registration documents—including a Notice of Intent, SWPPP, risk assessment, site map, certification, and annual fee—to the SWRCB prior to initiating construction activities.

PG&E will be required to implement the SWPPP during construction to prevent the discharge of sediment and other pollutants resulting from project construction. The SWPPP will outline implementation of BMPs for each activity that has the potential to degrade surrounding water quality through erosion, sediment runoff, and discharge of other pollutants.

3.5.2.13 *Cleanup and Post-Construction Restoration*

Crews will be required to maintain clean work areas and will be instructed that no debris may be left behind at any stage of the Reconductoring Activities. Packing crates, spare bolts, and construction debris will be picked up and hauled away for recycling or disposal during construction. Conductors removed from the Reconductoring Work Areas will be taken to appropriate disposal facilities to be reused, recycled, or disposed of in accordance with applicable laws and regulations. PG&E will conduct a final survey to ensure that cleanup activities have been successfully completed.

Work areas will generally be established by either matting over existing vegetation, or mowing, but certain portions of the Reconductoring Activities will be located within critical habitat, which would likely require restoration of Reconductoring Work Areas. PG&E will follow its existing permits conditions as described in Section 3.5.2.16 should restoration be required.

~~3.5.2.8~~ 3.5.2.14 *Construction Workforce and Equipment for Reconductoring Activities*

Project construction will include but may not be limited to a foundation crew, helicopter crew, tower crew, line crew, environmental inspector, and biological monitor. Approximately 15 construction workers will be within the a portion of the Reconductoring Work Areas on a typical work day; however, because work associated with Reconductoring Activities in one area may occur concurrently along with work in other Reconductoring Work Areas, up to approximately 25 workers may be somewhere on the Reconductoring Work Areas at any time. Multiple crews may be deployed to meet a tight construction schedule.

Reconductoring Activities will typically take place between 7 a.m. and 7 p.m., six days per week. Because construction will progress quickly, construction activities are not expected to take place near any one structure location for more than a few days, with the exception of foundation modifications that could take somewhat longer. Nighttime construction is not anticipated except for certain construction procedures that cannot be interrupted because of safety considerations, such as reconductoring over highway crossings, or to take advantage of line clearances during off-peak hours.

Anticipated Reconductoring Construction Equipment

Type of Equipment	Use
Bucket truck	Lift and transport workers
Skid steer	Remove excavation spoils
Concrete truck	Mix and deliver concrete
Pickup truck	Transport personnel, tools, and materials
Compressor	Operate tools
Crawler dozer	Pulling lines and sagging conductors
Drill rig	Excavate foundation holes
Rough terrain forklift	Lift and transport heavy construction items; set crane mats
Generator	Provide temporary power
Light-duty helicopter	Use for pulling operations; also transport crew and materials
Medium-duty helicopter	Set cage-top extensions and OPGW peaks
Man lift	Lift crews to structures
Mobile offices	Use as supervision and clerical office
Line truck w/ puller	Pull line in stringing operation
Line truck w/ wire reel	Transport reels of conductor
Line truck w/ tensioner	Hold tension against a pulling line during the stringing phase
Tractor trailer (semi-truck)	Haul materials, equipment, tools, etc.
Boom truck	Lift materials
Water truck	Provide dust control

~~3.5.2.9~~ 3.5.2.15 *Transmission Line Operation and Maintenance*

No material changes in maintenance and operation activities for the Newark-Trimble 115 kV Power Line will be required after reconductoring. The line will continue to be inspected annually or as needed when driven by an event, such as an emergency. The current PG&E facility inspection process involves three types of inspections: (1) ground inspections; (2) aerial inspections; and (3) climbing, if ground inspections indicate such need. Maintenance of the line is now and will continue to be generally conducted on an as-needed basis, when something is discovered in need of repair during inspections, or in response to an emergency.

~~3.5.2.10~~ 3.5.2.16 *Required Permitting for Reconductoring Activities*

PG&E's interconnection facilities and the Reconductoring Activities will be constructed by PG&E to provide electrical power to the data center uses. PG&E's contemplated activities described herein are analyzed in this CEQA document because, combined with the data center uses and related on- and off-site improvements described herein, the foregoing collectively constitute the whole of the Project being evaluated under CEQA. However, the PG&E interconnection facilities and the Reconductoring Activities are not part of the CEC SPPE application and will not be authorized under a CEC decision. Based on the preliminary scope of the PG&E interconnection facilities and the Reconductoring

Activities, PG&E's construction would require noticing under Section III.B of General Order 131-D (GO 131-D). PG&E would be required to separately comply with GO 131-D before pursuing any Reconductoring Activities.

3.5.2.17 *PG&E Construction Measures (PG&E Interconnection and Reconductoring)*

Work performed by PG&E on interconnection facilities and the Reconductoring Activities will be subject to all applicable regulatory requirements, such as, among others, those governing hazardous materials management and water quality protection. None of the Applicant Proposed Design Features included in Section 3.6 would be applicable to work performed by PG&E. Appendix K includes impact avoidance and minimization measures (AMMs) that will be implemented by PG&E as part of the Reconductoring Project. Appendix K includes the AMMs that are included in the existing PG&E permits and authorizations that are applicable to the Reconductoring Activities. The foregoing shall be referred to herein collectively as "PG&E Construction Measures".

3.6 PROJECT DESIGN FEATURES

The Project will incorporate specified features into the design of the Project, referenced herein as "Project Design Features" (or PDFs), which will ensure all Project impacts are less than significant. The PDFs are included here in summary form as part of the project description. During the CEC's CEQA review, it is anticipated that these PDFs will be incorporated as either enforceable mitigation measures via the Project's MMRP or as conditions of approval. Consistent with this understanding, some of the PDFs described below are identified as mitigation measures in the supporting technical reports that are included with this SPPE Application. These PDFs are not intended to and should not be applied to any of the work performed by PG&E as part of its Reconductoring Activities described in Section 3.5 above and will only apply to Microsoft's work within the Project Site boundary and those Offsite Infrastructure Areas described in Section 3.3.9.

Air Quality:

PDF AIR-1: To ensure that fugitive dust impacts are less than significant, the Project shall implement the BAAQMD's recommended BMPs during the construction phase. These BMPs shall be incorporated into the design of the Project and shall consist of:

- All exposed surfaces (soil piles, graded areas, and unpaved access roads) shall be watered at least two times per day or stabilized using other BMPs for erosion control.
- All haul trucks transporting material offsite shall be covered.
- All track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day.
- All vehicle speeds on onsite unpaved surfaces shall be limited to less than or equal to 15 miles per hour. In addition, no unpaved offsite roadways will be used to service the Project during construction (or operation).
- All roadways, driveways, and sidewalks shall be paved as soon as possible. Building pads shall be completed as soon as possible after grading unless seeding or soil binders are used.
- Equipment idling times shall be minimized to 5 minutes per the Air Toxics Control Measure (ATCM). Idling time signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer specifications. All equipment shall be checked by a certified visible emissions evaluator.
- Information on who to contact, contact phone number, and how to initiate complaints about fugitive dust problems will be posted at the site.

Biological Resources:

PDF BIO-1.1: Nesting Season Avoidance. To the extent feasible, commencement of construction activities should be scheduled to avoid the nesting season. If construction activities are scheduled to commence outside the nesting season, all impacts to nesting birds protected under the MBTA and California Fish and Game Code would be avoided. The nesting season for most birds in Santa Clara County extends from February 1 through August 31, inclusive.

PDF BIO-1.2: Preconstruction/Pre-disturbance Surveys and Buffers. If it is not possible to schedule commencement of construction activities and/or tree removal between September 1 and January 31, preconstruction surveys for nesting birds shall be conducted by a qualified ornithologist to ensure that no nests shall be disturbed during project implementation. These surveys shall be conducted no more than seven days prior to the initiation of demolition or construction activities, including tree removal and pruning. During this survey, the ornithologist shall inspect all trees and other potential nesting habitats (e.g., trees, shrubs, ruderal grasslands, buildings) in and immediately adjacent to the impact areas for nests. If an active nest is found sufficiently close to work areas to be disturbed by these activities, the ornithologist shall determine the extent of a construction free buffer zone to be established around the nest (typically 300 feet for raptors and 100 feet for other species), to ensure that no nests of species protected by the MBTA and California Fish and Game Code shall be disturbed during project implementation.

PDF BIO-2.1: Due to the potential for bird collisions with the SJ04 and SJ06 buildings, the project shall implement the following bird-safe building design considerations for these facades:

- Reduce the extent of glass on building facades to the extent feasible (as determined in consultation with the City building design standards and California Building Code requirements).
- Reduce or eliminate the visibility of plants behind glass.
- All glazing used on the building facades shall have a reflectivity index of no more than 20 percent.
- No more than 10 percent of the surface area of the combined façades for the SJ04 and SJ06 buildings shall have untreated glazing between the ground and 60 feet above ground. Bird-safe glazing treatments may include fritting, netting, permanent stencils, frosted glass, exterior screens, physical grids placed on the exterior of glazing or

ultraviolet patterns visible to birds. Vertical elements of the window patterns should be at least 0.25 inch wide at a maximum spacing of four inches or have horizontal elements at least 0.125 inch wide at a maximum spacing of two inches.

- Avoid free-standing clear glass walls, skywalks, transparent building corners, glass enclosures (e.g., greenhouses) on rooftops, and free-standing clear ~~gas~~glass railings where feasible. If any such features are included in the project design, all glazing used in any such features shall be 100 percent treated as specified above. These features shall be treated to a height of 60 feet above grade~~.~~ Features located more than 60 feet above grade are not required to be treated. For transparent glass corners, the required treatment area extends horizontally from a building corner as far the corner as it is possible to see through the corner to the other side of the building.
- Landscaping, including planted vegetation and water features, shall be designed to minimize the potential for collisions adjacent to glazed building facades~~.~~ For example, vegetation providing particularly valuable resources to birds (such as fruits) shall be planted away from glass facades, and vegetation in general shall be planted in such a way that it is not clearly reflected in windows. Water features shall be located away from building exteriors to reduce the attraction of birds toward glazed facades.

Due to the potential for night lighting to disorient birds, the Project shall implement the following bird-safe design considerations for all new interior and exterior lighting on the Project Site:

- Minimize exterior lighting to the extent feasible, except as needed for safety/security. All exterior lights shall be shielded and directed toward facilities on the Project Site to ensure that light is not directed upward or outward toward the Guadalupe River.
- Occupancy sensors or other switch control devices shall be installed on interior lights, with the exception of emergency lights or lights needed for safety/security purposes. If occupancy sensors are not active, these lights shall be programmed to shut off during non-work hours and between 10:00 p.m. and sunrise.
- To the extent consistent with the normal and expected operations of commercial uses under the project, take appropriate measures to avoid use of unnecessary lighting at night. Such measures may include the installation of motion-sensor lighting, automatic light shut-off

mechanisms, downward-facing exterior light fixtures, the use of Dark-Sky-compliant lighting[6], and others.

PDF BIO-3.1: A tree removal permit would be required from the City of San José for the removal of potential ordinance-sized trees. The removed trees would be replaced according to tree replacement ratios required by the City, as provided in **Error! Reference source not found.**~~Table 4.4-2~~ below.

Table 3.6-1: Tree Replacement Ratios

Circumference of Tree to be Removed	Type of Tree to be Removed			Minimum Size of Each Replacement Tree
	Native	Non-Native	Orchard	
38 inches or greater	5:1	4:1	3:1	15-gallon container
19 up to 38 inches	3:1	2:1	none	15-gallon container
Less than 19 inches	1:1	1:1	none	15-gallon container

x:x = tree replacement to tree loss ratio
Note: Trees greater than or equal to 38-inch circumference shall not be removed unless a Tree Removal Permit, or equivalent, has been approved for the removal of such trees. For Multi-Family residential, Commercial and Industrial properties, a permit is required for removal of trees of any size.
A 38-inch tree equals 12.1 inches in diameter.
A 24-inch box tree = two 15-gallon trees
Single Family and Two-dwelling properties may be mitigated at a 1:1 ratio.

A total of ~~19~~ 18 trees onsite would be removed. Three trees would be replaced at a 1:1 ratio, one tree would be replaced at a ratio of 2:1, four trees would be replaced at a 3:1 ratio, one tree would be replaced at a ratio of 4:1, and 10 trees would be replaced at a 5:1 ratio. The total number ~~and size~~ of replacement trees required to be planted on-site ~~is71~~is 71 trees, all of which would be planted from 15-gallon containers.

In the event the Project Site does not have sufficient area to accommodate the required tree mitigation, one or more of the following measures will be implemented, to the satisfaction of the Director of Planning, Building and Code Enforcement, at the development permit stage:

[6] Exterior lighting fixtures that meet the International Dark-Sky Association's standards for artificial lighting minimize glare while reducing light trespass and skyglow, and are required to be fully shielded and minimize the amount of blue light in the nighttime environment (International Dark-Sky Association 2020).

- The size of a 15-gallon replacement tree may be increased to 24-inch box and count as two replacement trees to be planted on the Project Site, at the development permit stage.
- The Project may pay Off-Site Tree Replacement Fee(s) to the City, prior to the issuance of Public Works grading permit(s), in accordance with the City Council approved Fee Resolution. The City will use the off-site tree replacement fee(s) to plant trees at alternative sites.

PDF BIO-4.1: The Project will pay applicable Santa Clara Valley Habitat Plan fees (including the nitrogen deposition fee) prior to issuance of any grading permits, as applicable. The Project applicant shall submit the Santa Clara Valley Habitat Plan Coverage Screening Form to the Director of Planning, Building and Code Enforcement (PBCE) or the Director's designee for approval and payment of all applicable fees prior to the issuance of a grading permit.

PDF BIO-5.1: Payment of Burrowing Owl Fees for Permanent Impacts on California Annual Grassland. The project will pay Santa Clara Valley Habitat Plan burrowing owl fees for the permanent loss of 18.6 acres of California annual grassland that provides ostensibly suitable, but currently unoccupied, burrowing owl foraging habitat. These fees shall be paid to the Santa Clara Valley Habitat Agency prior to issuance of a grading permit.

Cultural Resources:

PDF CUL-1.1: Treatment Plan: A Cultural Resources Treatment Plan shall be prepared by a qualified archaeologist, in consultation with a qualified Native American monitor, registered with the Native American Heritage Commission (NAHC) for the City of San José and that is traditionally and culturally affiliated with the geographic area. The Cultural Resources Treatment Plan shall reflect permit-level detail pertaining to depths and locations of all ground disturbing activities. The Cultural Resources Treatment Plan shall be prepared and submitted to the Supervising Environmental Planner of the City of San José Department of Planning, Building, and Code Enforcement prior to approval of a grading permit. The Treatment Plan shall contain, at a minimum:

- Identification of the scope of work and range of subsurface activities (including location map and development plan), including requirements for preliminary field investigations.
- Description of the environmental setting (past and present) and the historic/prehistoric background of the parcel (potential range of what might be found).

- Development of research questions and goals to be addressed by the investigation (what is significant vs. what is redundant information).
- Detailed field strategy used to record, recover, or avoid finds and address research goals.
- Analytical methods.
- Report structure and outline of document contents.
- Disposition of artifacts.
- Appendices: all site records, correspondence, and consultation with Native Americans, etc.

PDF CUL-1.2: Investigation: The Project applicant shall complete a preliminary field investigation program on the Project Site in conformance with the Cultural Resources Treatment Plan required under Project Design Feature PDF CUL-1.1. The locations of subsurface testing and exploratory trenching shall be determined prior to issuance of any grading permit based on the Cultural Resources Treatment Plan recommendations. A qualified archaeologist and a qualified Native American monitor, registered with the Native American Heritage Commission (NAHC) for the City of San José and that is traditionally and culturally affiliated with the geographic area, shall complete a presence/absence exploration.

If any finds are discovered during the preliminary field investigation, the Project shall implement PDF CUL-1.4 for evaluation and recovery methodologies. The results of the preliminary field investigation shall be submitted to the Supervising Environmental Planner of the City of San José Department of Planning, Building, and Code Enforcement for review and approval prior to issuance of any grading permit.

PDF CUL-1.3: Construction Monitoring and Protection Measures: Although the data recovery and treatment program performed in accordance with CUL 1.2 would be expected to recover potentially significant materials and information from the areas impacted prior to grading, it is possible that additional resources could remain. Therefore, ground-disturbing activities in native soil (e.g., grading and excavation) shall be completed under the observation of a qualified archaeologist and a qualified Native American monitor, registered with the Native American Heritage Commission (NAHC) for the City of San José and that is traditionally and culturally affiliated with the geographic area.

The qualified archaeologist or a qualified Native American monitor, registered with the Native American Heritage Commission (NAHC) for the City of San José and that is traditionally and culturally affiliated with the geographic area, shall have authority to halt construction activities

temporarily in the immediate vicinity of an unanticipated find. If, for any reasons, the qualified archaeologist or a qualified Native American monitor, registered with the Native American Heritage Commission (NAHC) for the City of San José and that is traditionally and culturally affiliated with the geographic area, is not present, but construction crews encounter a cultural resource, all work shall stop temporarily within 50 feet of the find until a qualified archaeologist in consultation with a qualified Native American monitor, registered with the Native American Heritage Commission (NAHC) for the City of San José and that is traditionally and culturally affiliated with the geographic area, has been contacted to determine the proper course of action. The Supervising Environmental Planner and Historic Preservation Officer of the City of San José Department of Planning, Building, and Code Enforcement shall be notified of any finds during the grading or other construction activities. Any human remains encountered during construction shall be treated according to the protocol identified in PDF CUL-2.5.

PDF CUL-1.4: Evaluation and Data Recovery: The Supervising Environmental Planner and Historic Preservation Officer of the City of San José Department of Planning, Building, and Code Enforcement shall be notified of any finds during the preliminary field investigation, grading, or other construction activities. construction activities shall be evaluated for eligibility for listing as a Candidate City Landmark and/or in the California Register of Historic Resources. Data recovery methods may include, but are not limited to, backhoe trenching, shovel test units, hand auguring, and hand-excavation.

The techniques used for data recovery shall follow the protocols identified in the Cultural Resources Treatment Plan required in PDF CUL-1.1. Data recovery shall include excavation and exposure of features, field documentation, and recordation.

PDF CUL-1.5: Human Remains: Native American coordination shall follow the protocols established under Assembly Bill 52, State of California Code, and applicable City of San José procedures.

If any human remains are found during any field investigations, grading, or other construction activities, all provisions of California Health and Safety Code Sections 7054 and 7050.5 and Public Resources Code Sections 5097.9 through 5097.99, as amended per Assembly Bill 2641, shall be followed. In the event of the discovery of human remains during construction, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. The project applicant or qualified archaeologist in consultation with a Native American representative registered with the Native American Heritage Commission from the City of San José and that is traditionally and culturally affiliated with the geographic

area shall immediately notify the Supervising Environmental Planner of the City of San José Department of Planning, Building, and Code Enforcement, who will then notify the Santa Clara County Coroner. The Coroner shall make a determination as to whether the remains are Native American.

If the remains are believed to be Native American, the Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC shall then designate a Most Likely Descendant (MLD). The MLD shall inspect the remains and make a recommendation on the treatment of the remains and associated artifacts.

If one of the following conditions occurs, the Project applicant or his authorized representative shall work with the Coroner, in consultation with a qualified Native American monitor, registered with the Native American Heritage Commission (NAHC) for the City of San José and that is traditionally and culturally affiliated with the geographic area, to reinter the Native American human remains and associated grave goods with appropriate dignity in a location not subject to further subsurface disturbance:

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

PDF CUL-1.6: Site Security: At the discretion of the Supervising Environmental Planner and Historic Preservation Officer of the City of San José Department of Planning, Building, and Code Enforcement, site fencing shall be installed on-site during the investigation, grading, building, or other construction activities on the Project Site to avoid destruction and/or theft of potential cultural resources. The responsible qualified archaeologist, in consultation with a qualified Native American monitor, registered with the Native American Heritage Commission (NAHC) for the City of San José and that is traditionally and culturally affiliated with the geographic area, shall advise the Supervising Environmental Planner and Historic Preservation Officer of the City of San José Department of Planning, Building, and Code Enforcement as to the necessity for a guard. The purpose of the security guard shall be to ensure the safety of any potential cultural resources (including human remains) that are left exposed overnight on the Project Site. The Director of PBCE shall have the final discretion to authorize the use of a security guard at the project site.

PDF CUL-1.7: Final Reporting: Once all analyses and studies required been completed, the project applicant, or representative, shall prepare a final report summarizing the results of the field investigation, data recovery activities and results, and compliance with the Cultural Resources Treatment Plan. The report shall document the results of field and laboratory investigations and shall meet the Secretary of the Interior's Standards for Archaeological Documentation. The contents of the report shall be consistent with the protocol included in the Cultural Resources Treatment Plan. The report shall be submitted to the Director of Planning, Building, and Code Enforcement for review and approval prior to issuance of any Certificates of Occupancy (temporary or final). Once approved, the final documentation shall be submitted to the Northwest Information Center at Sonoma State University, as appropriate.

PDF CUL-1.8: Curation: Upon completion of the final report required by the Cultural Resources Treatment Plan, all recovered archaeological materials not identified as tribal cultural resources by the Native American monitor, shall be transferred to a long-term curation facility. Any curation facility used shall meet the standards outlined in the National Park Services' Curation of Federally Owned and Administered Archaeological Collections (36 CFR 79). The Project applicant shall notify the Supervising Environmental Planner of the City of San José Department of Planning, Building, and Code Enforcement of the selected curation facility prior to the issuance of any Certificates of Occupancy (temporary or final). To the extent feasible, and in consultation with the Native American representative, all recovered Native American/tribal cultural resources and artifacts shall be reburied on-site in an area that is unlikely to be disturbed again. Treatment of materials to be curated shall be consistent with the protocols included in the c Cultural Resources Treatment Plan.

All archaeological materials recovered during the data recovery efforts shall be cleaned, sorted, catalogued, and analyzed following standard archaeological procedures, and shall be documented in a report submitted to the Director of Planning, Building and Code Enforcement and the NWIC.

PDF CUL-1.9: Dignified and Respectful Treatment – Cultural Sensitivity Training Prior to Construction: An important aspect of the consultation process is a dignified and respectful treatment of Tribal Cultural Resources. Prior to issuance of the grading permit, the Project shall be required to submit evidence that an Archaeological Monitoring Contractor Awareness Training was held prior to ground disturbance. The training shall be facilitated by the Project archaeologist in coordination with a Native American representative registered with the Native American Heritage Commissions for the City of

San José and that is traditionally and culturally affiliated with the geographic area as described in Public Resources Code Section 21080.3.

Geology and Soils:

PDF GEO-1: The Project shall implement the following City of San José Standard Permit Conditions related to geological hazards:

- To avoid or minimize potential damage from seismic shaking, the Project shall be constructed using standard engineering and seismic safety design techniques. Building design and construction at the Project Site shall be completed in conformance with the recommendations of an approved geotechnical investigation. The report shall be reviewed and approved by the City of San José Department of Public Works as part of the building permit review and issuance process. The buildings shall meet the requirements of applicable Building and Fire Codes as adopted or updated by the City. The Project shall be designed to withstand soil hazards identified (if any) on the Project Site (as well as the Off-Site Infrastructure Areas) and the Project shall be designed to reduce the risk to life or property on-site and off-site to the extent feasible and in compliance with applicable provisions of the Building Code.
- All excavation and grading work shall be scheduled in dry weather months or, in the alternative, construction sites shall be weatherized.
- Stockpiles and excavated soils shall be covered with secured tarps or plastic sheeting when not in use.
- Ditches shall be installed to divert runoff around excavations and graded areas if necessary.
- The Project shall be constructed in accordance with the standard engineering practices in the California Building Code, as adopted by the City of San José. These standard practices would ensure that the future buildings on the Project Site are designed to properly account for soils-related hazards on the Project Site.

PDF GEO-2: The Project shall implement the following City of San José Standard Permit Condition related to paleontological resources:

- If vertebrate fossils are discovered during construction, all work on the Project Site or within the Off-Site Infrastructure Areas , as relevant) within 50 feet of any potential fossil find shall stop immediately, Director of Planning or Director's designee of the Department of Planning, Building and Code Enforcement (PBCE) shall be notified, and a qualified professional paleontologist shall assess the nature and importance of the find and recommend appropriate treatment, to the extent the find is considered significant. Treatment may include, but is not limited to,

preparation and recovery of fossil materials so that they can be housed in an appropriate museum or university collection and may also include preparation of a report for publication describing the finds. The Project applicant shall be responsible for implementing the recommendations of the qualified paleontologist. A report of all findings shall be submitted to the Director of Planning or Director's designee of the PBCE.

Greenhouse Gas Emissions:

PDF GHG-1.1: The Project owner shall participate in the San José Clean Energy (SJCE) at the Total Green level (i.e., 100% carbon-free electricity) for electricity accounts associated with the Project, or enter into an electricity contract with SJCE or participate in a clean energy program that accomplishes the same goals of 100% carbon-free electricity as the SJCE Total Green Level.

PDF GHG-1.2: The Project applicant shall use renewable diesel fuel for the diesel-fired generators to the extent feasible. During an emergency where renewable diesel fuel supplies may be limited, the project owner will document their efforts to secure other vendors of renewable diesel fuel prior to refueling with non-renewable diesel. The Project applicant shall provide such documentation to the Director or Director's designee with the City of San Jose Planning, Building and Code Enforcement (PBCE).

Hazards and Hazardous Materials:

PDF HAZ-1.1: A Site Management Plan (SMP) shall be prepared for the Project Site if required ~~and implemented~~ and any contaminated soils found in concentrations above established thresholds shall be removed and disposed of according to California Hazardous Waste Regulations or the contaminated portions of the site shall be capped beneath the planned development under the regulatory oversight of the Santa Clara County Hazardous Materials Compliance Division (HMCD) or the California Department of Toxic Substances Control (DTSC). The contaminated soil removed from the site shall be hauled off-site and disposed of at a licensed hazardous materials disposal site.

If there are no contaminants identified in areas of the Project Site to be disturbed that exceed applicable screening levels for ~~construction workers~~the protection of future residential and commercial workers, published by the Regional Water Quality Control Board, Department of Toxic Substances Control, and/or Environmental Protection Agency, the Project applicant shall not be required to prepare or submit a ~~the~~ Site Management Plan. ~~to an oversight agency and instead shall only submit to the City prior to construction earthwork activities.~~

In addition, all contractors and subcontractors shall develop a Health and Safety Plan (HSP) specific to their scope of work and based upon the known environmental conditions. The HSP shall be approved by the Director or Director's designee with the City of San Jose Department of Planning, Building and Code Enforcement (PBCE) and the City of San Jose Environmental Services Department (ESD) and implemented under the direction of a Site Safety and Health Officer.

Components of the SMP (if required) shall include, but shall not be limited to:

- A detailed discussion of the site background;
- Notification procedures if previously undiscovered significantly impacted soil or free fuel product is encountered during construction;
- Onsite soil reuse guidelines based on the California Regional Water Quality Control Board (RWQCB), San Francisco Bay Region's reuse policy;
- Sampling and laboratory analyses of excess soil requiring disposal at an appropriate off- site waste disposal facility;
- Soil stockpiling protocols; and
- Protocols to manage groundwater that may be encountered during trenching and/or subsurface excavation activities.

Components of the HSP shall include, but shall not be limited to, the following elements, as applicable:

- Provisions for personal protection and monitoring exposure to construction workers;
- Procedures to be undertaken in the event that contamination is identified above action levels or previously unknown contamination is discovered;
- Procedures for the safe storage, stockpiling, and disposal of contaminated soils;
- Provisions for the onsite management and/or treatment of contaminated groundwater during extraction or dewatering activities; and
- Emergency procedures and responsible personnel.

The SMP and HSP shall be submitted to HMCD, DTSC, or equivalent regulatory agency for review and/or approval (if required). Copies of the approved SMP and HSP shall be provided to the PBCE Supervising Environmental Planner and Environmental Services Department (ESD) prior to issuance of grading permits (if required).

PDF HAZ-1.2 The discharge of any water from construction dewatering activities shall be required to comply with National Pollutant Discharge Elimination System (NPDES) permit requirements or wastewater discharge permit conditions to the sanitary sewer, which may involve installation of a treatment system(s) at the dewatering location. For short-term discharge (less than 1-year), a discharge permit shall be obtained from the City of San José's Watershed Protection Division and the water discharged to the sanitary sewer. For long term discharge (greater than 1-year), the Project applicant shall obtain a NPDES permit from the California Regional Water Quality Control Board for discharge to the storm system.

Both discharge permits require pre-testing of the water to determine if the water meets the respective City or Regional Water Quality Control Board (RWQCB) pollutant discharge limits. The water shall be analyzed by a State-certified laboratory for the suspected pollutants prior to discharge. Water that exceeds discharge limits (if any) shall be treated to reduce pollutant concentrations to acceptable levels prior to discharge. Based on the results of the analytical testing, the Project applicant shall work with the RWQCB and the local wastewater treatment plant to determine appropriate disposal options and then implement same. A copy of the discharge permit or NPDES permit, whichever is applicable, shall be submitted to the Director of Planning or Director's designee prior to the start of construction.

Hydrology and Water Quality:

PDF HYD-1.1: Consistent with applicable provisions of the General Plan, standard permit conditions that shall be implemented to prevent stormwater pollution and minimize potential sedimentation during construction include, but are not limited to, the following:

- Burlap bags filled with drain rock shall be installed around storm drains to route sediment and other debris away from the drains.
- Earthmoving or other dust-producing activities shall be suspended during periods of high winds and when other dust reducing measures are ineffective.
- All exposed or disturbed soil surfaces shall be watered at least twice daily to control dust as necessary.

- Stockpiles of soil or other materials that can be blown by the wind shall be watered or covered.
- All trucks hauling soil, sand, and other loose materials shall be covered and all trucks shall maintain at least two feet of freeboard.
- All paved access roads, parking areas, staging areas and residential streets adjacent to the construction sites shall be swept daily (with water sweepers).
- Vegetation in disturbed areas shall be replanted as quickly as possible.
- All unpaved entrances to the Project Site shall be filled with rock to remove mud from tires prior to entering City streets. A tire wash system shall be installed if requested by the City.
- The Project applicant shall comply with the City of San José Grading Ordinance, including implementing erosion and dust control during site preparation and with the applicable City of San José Zoning Ordinance requirements for keeping adjacent streets free of dirt and mud during construction.

Noise:

PDF NOI-1: The Project shall implement the following City of San José Standard Permit Conditions related to construction noise:

- Limit construction hours to between 7:00 AM and 7:00 PM, Monday through Friday, unless permission is granted with a development permit or other planning approval. No construction activities are permitted on the weekends at sites within 500 feet of a residence. Construction outside of these hours may be approved through a development permit based on a site-specific "construction noise mitigation plan" and a finding by the Director of PBCE that the construction noise mitigation plan is adequate to prevent noise disturbance of affected residential uses.
- Construct solid plywood fences around construction sites adjacent to operational business, residences, or other noise-sensitive land uses.
- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Prohibit unnecessary idling of internal combustion engines.
- Locate stationary noise-generating equipment such as air compressors or portable power generators as far as possible from sensitive receptors (if any). Construct temporary noise barriers to scree stationary noise-generating equipment when located near adjoining sensitive land uses (if any).

- Utilize “quiet” are compressors and other stationary noise sources where technology exists.
- Control noise from construction workers’ radios to a point where they are not audible at existing residences bordering the Off-Site Infrastructure Areas.
- Notify all adjacent business, residences, and other noise-sensitive land uses of the construction schedule, in writing, and provide a written schedule of “noisy” construction activities to adjacent land uses and nearby residences.
- If complaints are received or excessive noise levels cannot be reduced using the measures above, erect a temporary noise control blanket barrier along surrounding building facades that face the construction sites.
- Designate a “disturbance coordinator” who shall be responsible for responding to any complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (e.g., bad muffler, etc.) and shall require that reasonable measures be implemented to current the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include it in the notice sent to neighbors regarding the construction schedule.

Transportation:

PDF TRN-1: The Project shall implement the following VMT reduction measure.

- The Project shall limit the on-site parking supply (a Tier 3 VMT reduction measure) to mitigate the VMT impact. The Project shall provide a total of 148 vehicle parking spaces, which is 25 fewer spaces than what the City of San José Municipal Code requires. The Project shall request and obtain a parking exception from the City of San José Department of Planning, Building & Code Enforcement in order to qualify for the parking reduction.

Appendix J

FAA Final Notices of Determination of No Hazard

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2023-AWP-12769-OE

Issued Date: 10/24/2023

Sieu Quan
Microsoft-CA
1 Microsoft Way
Redmond, WA 98052

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Building SJC04-20
Location:	San Jose, CA
Latitude:	37-22-42.29N NAD 83
Longitude:	121-55-56.90W
Heights:	32 feet site elevation (SE)
	135 feet above ground level (AGL)
	167 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

_____ At least 10 days prior to start of construction (7460-2, Part 1)
__X__ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/ lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

The structure considered under this study lies in proximity to an airport and occupants may be subjected to noise from aircraft operating to and from the airport.

This determination expires on 04/24/2025 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.

(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (847) 294-7575, or vivian.vilaro@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-AWP-12769-OE.

Signature Control No: 596394188-602805225 (DNE)
Vivian Vilaro
Specialist

Attachment(s)
Map(s)

TOPO Map for ASN 2023-AWP-12769-OE

Sectional Map for ASN 2023-AWP-12769-OE

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

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The structure considered under this study lies in proximity to an airport and occupants may be subjected to noise from aircraft operating to and from the airport.

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NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

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Vivian Vilaro
Specialist

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Signature Control No: 596394188-602805225 (DNE)
Vivian Vilaro
Specialist

Attachment(s)
Map(s)

TOPO Map for ASN 2023-AWP-12769-OE

Sectional Map for ASN 2023-AWP-12769-OE

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2023-AWP-12769-OE

Issued Date: 10/24/2023

Sieu Quan
Microsoft-CA
1 Microsoft Way
Redmond, WA 98052

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Building SJC04-20
Location:	San Jose, CA
Latitude:	37-22-42.29N NAD 83
Longitude:	121-55-56.90W
Heights:	32 feet site elevation (SE)
	135 feet above ground level (AGL)
	167 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

_____ At least 10 days prior to start of construction (7460-2, Part 1)
__X__ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/ lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

The structure considered under this study lies in proximity to an airport and occupants may be subjected to noise from aircraft operating to and from the airport.

This determination expires on 04/24/2025 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
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2023-AWP-12910-OE

Issued Date: 10/24/2023

Adam McKnight
Microsoft-WA
1 Microsft Way
Redmond, WA 98052

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Building SJC06-24
Location:	San Jose, CA
Latitude:	37-22-44.41N NAD 83
Longitude:	121-56-00.60W
Heights:	33 feet site elevation (SE)
	135 feet above ground level (AGL)
	168 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

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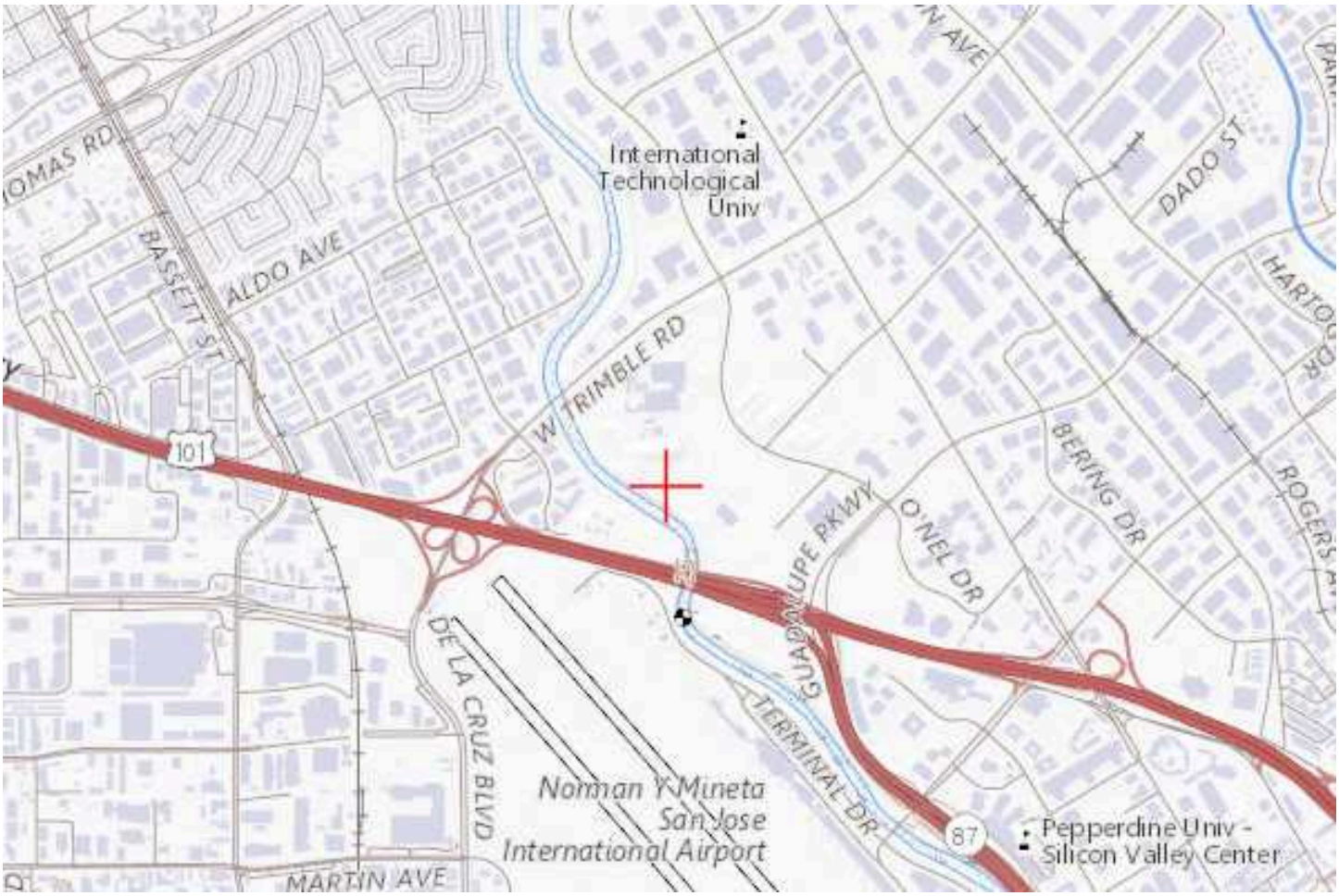

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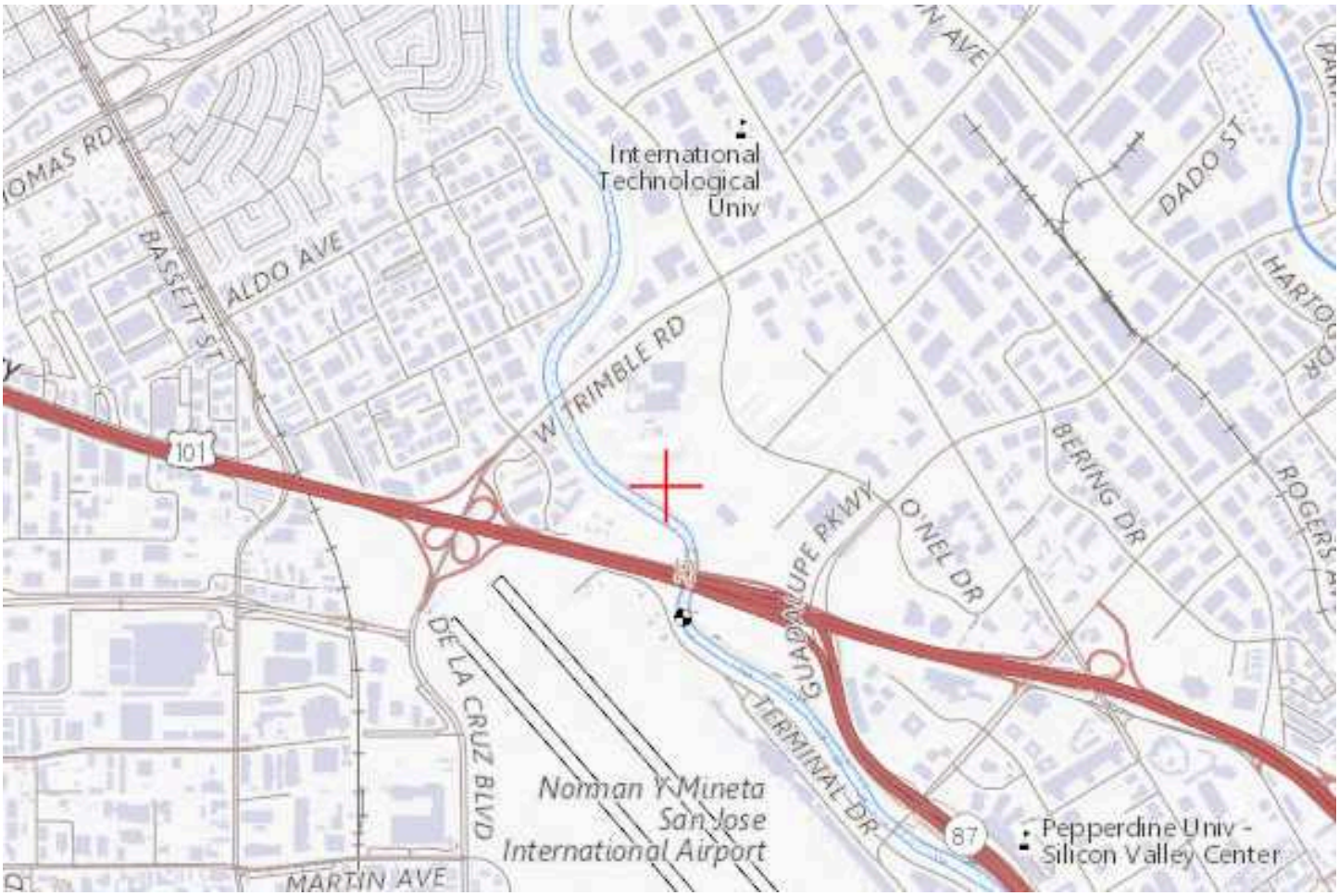

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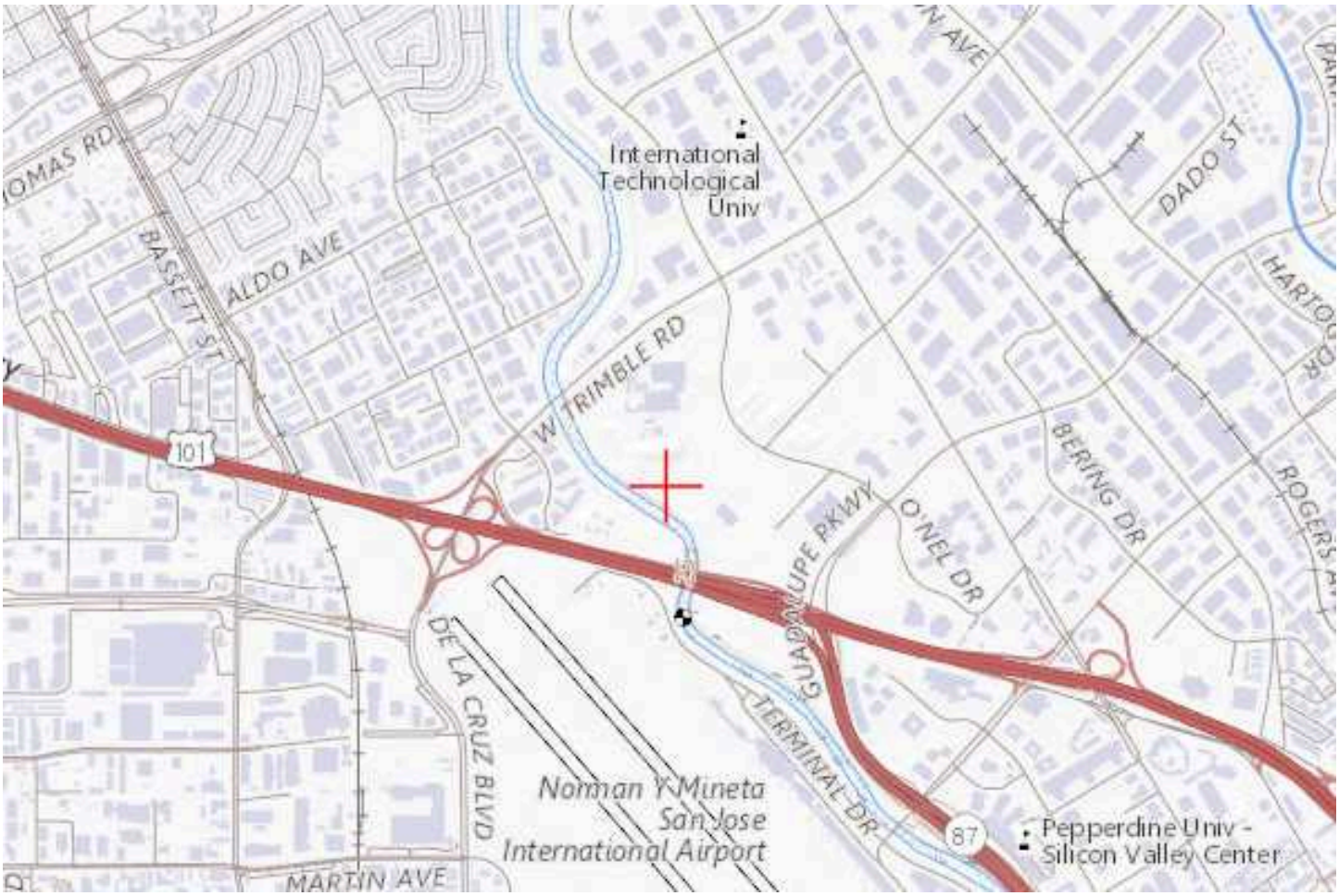

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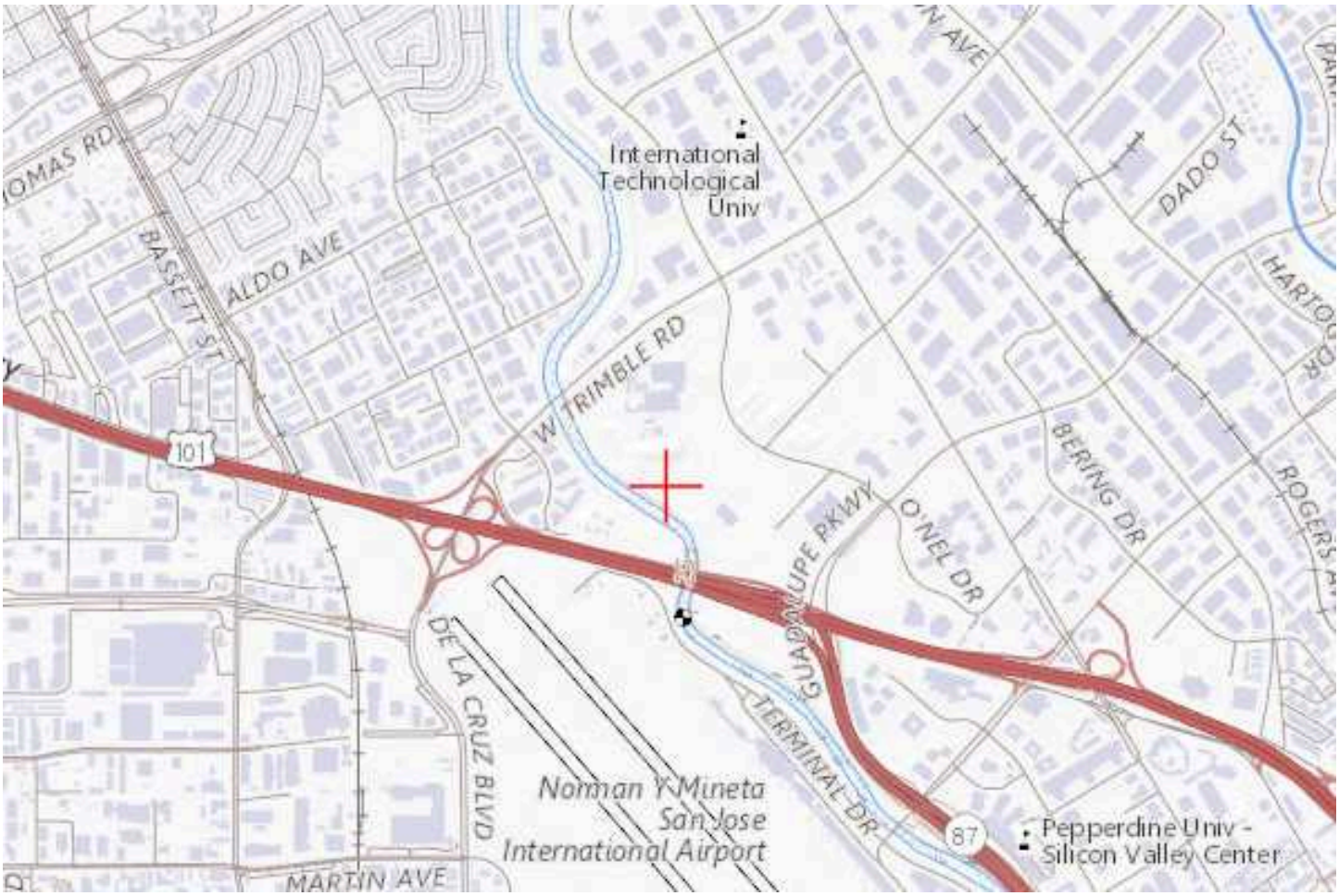

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Appendix K

PG&E Matrix of Existing Permit Conditions Applicable to Reconductoring Activities

Pacific Gas and Electric Company Avoidance and Minimization and Applicant Proposed Measures by Programmatic Agreement and corresponding Final Environmental Impact Report					HT Harvey and Associates Microsoft San Jose City Data Center 4 PG&E Reconductoring Biological Resources Report, Section 6. Impacts and Mitigation Measures																								
					6.3.1	6.3.2	6.3.3	6.3.4	6.3.5	6.3.6	6.3.7	6.3.8	6.3.9	6.3.10	6.3.11	6.3.12	6.3.13	6.3.14	6.4	6.5	6.6	6.7	6.8	6.9				
Measure ID	Programmatic Agreement or Final EIR	Measure Text	Applies?	Notes	Special Status Plants	Vernal Pool tadpole shrimp	Crotch's Bumble Bee and Monarch Butterfly	Water quality, Special-status fish, and EFH	California tiger salamander	Northwestern pond turtle	CA Ridgway's rail and CA black rail	Western snowy plover	Burrowing owl	Nesting birds	Salt marsh harvest mouse and salt marsh wandering shrew	Nonbreeding special-status animals	Bird collisions and electrocutions	Nitrogen depositions	Riparian Habitat or other sensitive natural communities	Wetlands	Wildlife Movement	Conflicts with local policies	Impacts due to Conflicts with an adopted HCP	Cumulative Impacts				
FP-01	BAHCP	Hold 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.	Yes	This measure applies to all projects.	X	X	X		X	X	X	X	X	X	X	X			X	X	X							
FP-02	BAHCP	Park vehicles and equipment on pavement, existing roads, or other disturbed or designated areas (barren, gravel, compacted dirt).	Yes	This measure applies to all projects.	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X							
FP-03	BAHCP	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.	Yes	This measure applies to all projects.	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X							
FP-04	BAHCP	Locate off-road access routes and work sites to minimize impacts on plants, shrubs, and trees, small mammal burrows, and unique natural features (e.g., rock outcrops).	Yes	This measure applies to all projects.	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X							
FP-05	BAHCP	Notify conservation land owner at least 2 business days prior to conducting covered activities on protected lands (state and federally owned wildlife areas, ecological reserves, or conservation areas); more notice will be provided if possible or if required by other permits. If the work is an emergency, as defined in PG&E's Utility Procedure ENV8003P-01, PG&E will notify the conservation land owner within 48 hours after initiating emergency work. While this notification is intended only to inform conservation land owner, PG&E will attempt to work with the conservation land owner to address landowner concerns.	Yes	This measure applies to projects on protected lands. The northern portion of the project area is on Don Edwards San Francisco Bay National Wildlife Refuge lands.	X	X	X		X	X	X	X	X	X	X	X			X	X	X							
FP-06	BAHCP	Minimize potential for covered species to seek refuge or shelter in pipes and culverts. Inspect pipes and culverts, of diameter 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. Immediately contact a biologist if a covered species is suspected or discovered.	Yes	This measure applies to all covered amphibians, reptiles, and mammals. The California tiger salamander, salt marsh harvest mouse, salt marsh wandering shrew, and western pond turtle may be found within the project area.	X				X	X	X	X	X	X	X	X			X	X	X							
FP-07	BAHCP	Vehicle speeds on unpaved roads will not exceed 15 miles per hour.	Yes	This measure applies to all projects.	X	X	X		X	X	X	X	X	X	X	X			X	X	X							
FP-08	BAHCP	Prohibit trash dumping, firearms, open fires (such as barbecues), hunting, and pets (except for safety in remote locations) at work sites.	Yes	This measure applies to all projects.	X	X			X	X	X	X	X	X	X	X			X	X	X							
FP-09	BAHCP	During fire season in designated State Responsibility Areas, equip all motorized equipment with federally approved or stateapproved spark arrestors. Use a backpack pump filled with water and a shovel and fire-resistant mats and/or windscreens when welding. During fire "red flag" conditions as determined by Cal Fire, curtail 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.	Yes	This measure applies to all projects that will be conducted during the fire season. The project will be constructed during the fire season.	X		X			X	X	X	X	X	X	X			X	X	X							
FP-10	BAHCP	Minimize the activity footprint and minimize the amount of time spent at a work location to reduce the potential for take of species.	Yes	This measure applies to all projects.	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X							
FP-11	BAHCP	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.	Yes	This measure applies to all projects.	X	X	X		X	X					X	X			X	X	X							
FP-12	BAHCP	Stockpile soil within established work area 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.	Yes	This measure applies to all projects that involve excavation.	X	X	X		X	X					X	X					X							
FP-13	BAHCP	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 are not trapped. If any wildlife are found, a biologist will be notified and will relocate the species to adjacent habitat or the species will be allowed to naturally disperse, as determined by a biologist.	Yes	This measure applies to all projects that involve excavation and have the potential for covered amphibians, reptiles, and mammals to be in the area.	X				X	X					X	X					X							
FP-14	BAHCP	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.	Yes	This measure applies to all covered grassland species. Grassland habitat is present within the northern portion of the project area.	X	X	X		X	X					X	X			X	X	X							
FP-15	BAHCP	Prohibit vehicular and equipment refueling 250 feet from the edge of vernal pools, and 100 feet from the edge of other wetlands, streams, or waterways when feasible. If refueling must be conducted closer to wetlands, construct a secondary containment area subject to review by an environmental field specialist and/or qualified biologist. Maintain spill prevention and cleanup equipment in refueling areas.	Yes	This measure applies to vernal pool species, California freshwater shrimp, California red-legged frog, California tiger salamander, and San Francisco garter snake. California tiger salamander and vernal pool tadpole shrimp may be present in the project area.	X	X			X	X					X	X			X	X	X							
FP-16	BAHCP	Maintain a buffer of 250 feet from the edge of vernal pools and 50 feet from the edge of wetlands, ponds, or riparian areas. If maintaining the buffer is not possible because the areas are either in or adjacent to facilities, the field crew will implement other measures as prescribed by the land planner, biologist, or HCP administrator to minimize impacts by flagging access, requiring foot access, restricting work until dry season, or requiring a biological monitor during the activity.	Yes	This measure applies to vernal pool species, California freshwater shrimp, California red-legged frog, California tiger salamander, and San Francisco garter snake. California tiger salamander and vernal pool tadpole shrimp may be present in the project area.	X	X			X	X					X	X			X	X	X							
FP-17	BAHCP	Directionally fell trees away from an exclusion zone, if an exclusion zone has been defined. If this is not possible, remove the tree in sections. Avoid damage to adjacent trees to the extent possible. Avoid removal of snags and conifers with basal hollows, crown deformities, and/or limbs over 6 inches in diameter.	Maybe	This measure applies to all projects where trees may be felled.	X				X	X	X	X	X	X	X	X					X							
FP-18	BAHCP	Nests with eggs and/or chicks will be avoided: contact a biologist, land planner or the Avian Protection Program manager for further guidance.	Yes	This measure applies to all nesting bird species for all projects.							X	X	X	X														
Hot Zone-6	BAHCP	Limit activities to foot access only when working off of established roadways unless a biological monitor flags off- road access routes for equipment that minimize impacts on habitat and species. This includes the identification and avoidance of vernal pools and stock ponds. Covered activities that cannot avoid vernal pool impacts will be completed when pools are clearly dry.	Yes	This measure applies to California tiger salamander. The Central California Distinct Populations Segments (DPSs) may be present within the project area.		X			X										X	X							
Hot Zone-8	BAHCP	(salicornia) or smooth cordgrass (Spartina alterniflora) dominated habitats in order to minimize impacts on these species. Crews will hand-carry equipment and use protection mats (landing pads, pallets) to minimize ground disturbance when working within pickleweed or smooth cordgrass. Small areas of healthy vegetation will be cleared by hand prior to placement of protective mats. To avoid take of salt marsh harvest mouse, the biologist will assess the site to determine if: vegetation protection mats are appropriate, use of helicopters is needed, vegetation removal by hand is needed, and an onsite biological monitor is needed. Prior to placement of mats or removal of vegetation, the vegetation will be disturbed (i.e., flushed) to force movement of salt marsh harvest mouse into adjacent tidal marsh areas. Immediately following flushing, the field crew will place a mat or manually remove vegetation with nonmotorized tools (e.g., hoe, rake, trowel, or shovel) to the bare ground.	Yes	This measure applies to California Ridgway's rail and salt marsh harvest mouse (Marsh/Bay Fringe). California Ridgway's rail and salt marsh harvest mouse may be found within the project area.							X	X		X	X													
Wetland-1	BAHCP	Identify vernal pools and establish buffers. Maintain a buffer of 250 feet around vernal pools and vernal pool complexes. If maintaining the buffer is not possible because the areas are either in or adjacent to facilities, the field crew will implement other measures as prescribed by the biologist or HCP administrator to minimize impacts. These measures include flagging access, requiring foot access, restricting work until the dry season, requiring a biological monitor during the activity, or excavating burrows in ROWs where trenching will occur. Activities must maintain the downstream hydrology to the vernal pool or complex. Additional minimization measures may be implemented with prior concurrence from USFWS.	Yes	This measure applies to vernal pool species, including California tiger salamander. Vernal pool species and the Central California DPSs of the California tiger salamander may be present within the project area.		X			X										X	X							
Wetland-2	BAHCP	Identify wetlands, ponds, and riparian areas and establish buffers. Maintain a buffer of 50 feet around wetlands, ponds, and riparian areas. If maintaining the buffer is not possible because the areas are either in or adjacent to facilities, the field crew will implement other measures as prescribed by the biologist or HCP administrator to minimize impacts. These measures include flagging access, requiring foot access, restricting work until the dry season, requiring a biological monitor during the activity, or excavating burrows in ROWs where trenching will occur. Activities must maintain the downstream hydrology to the wetland, pond, or riparian area. Additional minimization measures may be implemented with prior concurrence from USFWS.	Yes	This measure applies to California freshwater shrimp, California tiger salamander (both Central California and Sonoma County DPSs), California red-legged frog, and San Francisco garter snake. The California freshwater shrimp and California tiger salamander (Sonoma County DPS) may be found within the project area.		X		X	X	X						X				X	X							
Plant-02	BAHCP	Heavy equipment shall remain on access roads or other previously disturbed areas unless otherwise prescribed by a land planner, biologist, or HCP administrator.	Yes	This measure applies to all projects.	X																							
Plant-03	BAHCP	Stockpile separately the upper 4 inches of topsoil during excavations associated with covered activities. Stockpiles topsoil will be used to restore the disturbed ROW.	Yes	This measure applies to all projects involving excavation.	X																							
Plant-05	BAHCP	If a covered plant species is present and it cannot be avoided, PG&E will salvage plant material (i.e., seeds, cuttings, whole plants) and prepare a restoration plan that details the handling, storage, propagation, or reintroduction to suitable and appropriate habitat subject to USFWS review and approval.	Yes	This measure applies to all covered annual plant species. Contra Costa goldfields may be present within the project area.	X																							

Plant-06	BAHCP	If a covered annual plant species is present and it cannot be avoided, conduct covered activities after seeds have matured to the extent possible.	Yes	This measure applies to all covered annual plant species. Contra Costa goldfields may be present within the project area.	X																										
BA Attachment A: A	RGP 40 NMFS BO	PG&E will develop and implement an Activity-Specific Erosion and Sediment Control Plan (A-ESCP) to prevent storm water pollution on all construction projects, and good-housekeeping best management practices (BMPs) are implemented throughout the year. PG&E's Good Housekeeping A-ESCP with standard BMPs is presented as Attachment A to the BA.	Yes	This measure applies to all projects that may occur in listed fish habitat. The project area will occur within fish habitat in Pond A18, Coyote Creek, South Coyote Slough, Artesian Slough, Mud Slough, and the lower Guadalupe River.				X																						
NOAABA-AMM-01:	RGP 40 NMFS BO	Every effort will be made to minimize disturbance to subtidal and wetland vegetation. During boat access, boats will be docked to existing facilities or landed in areas that minimize the potential impact to subtidal and wetland vegetation. Barges will be placed on mudflats in such a manner that subtidal and wetland vegetation is not disturbed. Work crews will be trained to avoid vegetated areas, and foot traffic will be confined to existing facilities, mudflats, and established work areas to minimize disturbance to vegetation.	Yes	This measure applies to all projects that may occur in listed fish habitat. The project area will occur within fish habitat in Pond A18, Coyote Creek, South Coyote Slough, Artesian Slough, Mud Slough, and the lower Guadalupe River.				X																						
NOAABA-AMM-02:	RGP 40 NMFS BO	All water pumps used during intake dewatering and fish relocation will follow the intake screen criteria identified in NOAA Fisheries' Juvenile Fish Screen Criteria for Pump Intakes (1996) See https://media.fisheries. noaa.gov/dam-migration/fish_screen_criteria_for_pumped_water_intakes.pdf. Water remaining in the cofferdam will be pumped directly onto the adjacent land at low tide when feasible, and a qualified biological monitor will be present. If pumping water onto adjacent land is not feasible, water will be pumped into open water or mudflats directly adjacent to the cofferdam. Fish encountered during dewatering will be carefully relocated by a NOAA Fisheries and U.S. Fish and Wildlife Service-approved fisheries biologist to suitable habitat adjacent to work areas, per NOAABA-AMM-03. Dewatering activities will not be conducted within streams that support federally listed fish.	Maybe	This measure applies to all projects that may occur in listed fish habitat. The project area will occur within fish habitat in Pond A18, Coyote Creek, South Coyote Slough, Artesian Slough, Mud Slough, and the lower Guadalupe River.				X																						
NOAABA-AMM-03:	RGP 40 NMFS BO	An experienced fisheries biologist will be present to observe cofferdam dewatering activities whenever pumps are operating and monitor work in tidal waters that may hold salmonids in isolated pools. The agency-approved biologist will ensure that fish species do not become trapped against the cofferdam filter and any fish that were not swept out of the work area will be rescued. Efforts will be made to reduce collecting and handling stress, minimize the time that fish are held in buckets, and minimize handling stress during processing and release. Fish collection efforts will be conducted using sweep and block nets and will occur within the cofferdam area until multiple passes have been conducted and substantial depletion or absence of fish has been documented. Rescued fish will be released 100 feet away from the cofferdam, or at another location approved by NOAA Fisheries as soon as possible. Additional fish salvage and relocation procedures include the following: •No employee or contractor will remove any fish, dead or alive, from the site for personal use. All efforts to reduce the time that live fish are out of the water will be made to reduce the chances of fish injury or death during the fish rescue. All fish will be promptly returned to the water. •Listed fish species will be processed first and released as soon as possible. All fish species will be recorded on data sheets, as well as the time and date that each individual was caught; location where the individual was caught; gear type used; water temperature; total number of individuals caught; and any other pertinent observations of the fish. •After the fish rescue effort is completed, dewatering of the area will continue. The agency-approved biologist and/or fish rescue biologist will provide a worker education program in the event that additional fish may remain within the dewatering area. The biologist will return to the site to rescue additional fish if the workers observe them within the dewatering area. •If any turtles or snakes are captured during fish rescue, they will be relocated to the fish release site(s). Following dewatering and relocation of fish, further monitoring by an experienced fisheries biologist will no longer be required for the dewatered area, unless the integrity of the cofferdam seal is compromised and the work area becomes re-watered	Maybe	This measure applies to all projects that may occur in listed fish habitat. The project area will occur within fish habitat in Pond A18, Coyote Creek, South Coyote Slough, Artesian Slough, Mud Slough, and the lower Guadalupe River.				X																						
NOAABA-AMM-05:	RGP 40 NMFS BO	In-water O&M activities that include impact hammer use and/or cofferdam construction are considered "high-impact activities". High-impact activities within the San Francisco, San Pablo, Suisun, and Grizzly bays will be planned and scheduled to occur between June 1 and November 30. No impact pile driving will be initiated if it cannot reasonably be completed by November 30. If unforeseen circumstances prevent the completion of pile driving by November 30, PG&E will request an extension from the Corps on a case-by-case basis to complete the pile driving that has already been initiated. Pole reinforcement and repair above mean high water, as well as boardwalk repair and replacement, are not subject to this LOP, as PG&E expects potential effects to federally listed fish species will be minimal or will not occur.	Maybe	Impact hammers may be used and cofferdams may be installed as part of the project.				X																						
NOAABA-AMM-06:	RGP 40 NMFS BO	Prolonged, soft-start procedures will be implemented when impact pile driving is required for piles greater than 20 inches in diameter in waters that provide habitat for federally listed anadromous fish species. Soft-starts will include pile driving at 40- to 60-percent reduced energy for at least 15 seconds, followed by a 1-minute waiting period. This procedure will be repeated at least two times before commencing ful energy impact pile driving	Maybe	Impact hammers may be used and cofferdams may be installed as part of the project.				X																						
NOAABA-AMM-08:	RGP 40 NMFS BO	PG&E will prioritize using a vibratory hammer to install piles, but when an impact hammer is necessary, only one hammer will be used at a time with no more than 2,000 strikes per day on piles within an individual work area. PG&E will also utilize sound attenuation devices during pile-driving (e.g., hammer cushions, bubble curtains, dewatered cofferdams, dewatered isolation casings, etc.). Air bubble curtains would be utilized for impact driving of piles larger than 12 inches in diameter unless the work site is dewatered by a cofferdam. In instances when impact driving is limited to periods of low tide and water depths are less than 4 inches for the entire duration of the pile driving, air bubble curtains are not required. In addition, pile-driving activities that require multiple days at the same location will occur at least 12 hours apart to avoid impacts to federally listed fish species.	Maybe	New piles will be installed as part of the project.				X																						
NOAABA-AMM-09:	RGP 40 NMFS BO	PG&E will prioritize using a vibratory hammer to install sheet pile cofferdams, but when an impact hammer is necessary, only one hammer will be used at a time with no more than 2,000 strikes per day on piles within an individual work area. PG&E will also utilize sound attenuation devices during pile-driving (e.g., hammer cushions, bubble curtains, dewatered cofferdams, dewatered isolation casings, etc.). In addition, pile-driving activities that require multiple days at the same location will occur at least 12 hours apart to avoid impacts to federally listed fish species. Cofferdams will be installed and closed during low tide.	Maybe	Cofferdams may be installed as part of the project.				X																						
NOAABA-AMM-10:	RGP 40 NMFS BO	PG&E will conduct hydroacoustic monitoring during the installation of all 72-inch piles when cofferdams are not utilized. PG&E will also conduct hydroacoustic monitoring during the installation of the first 60-inch pile at each discrete tower location when cofferdams are not used. If the sound pressure levels (SPLs) do not exceed 206 decibels (dB) peak and/or the daily accumulated sound exposure level (cSEL) does not exceed 187 dB during the monitoring (see Table 7 in the Project's September 2022 Biological Assessment) of the installation of the first 60-inch pile, PG&E may stop monitoring activities at that tower location. If SPLs or cSEL dB levels exceed limits established in Table 7 of the Project's September 2022 Biological Assessment for 60-inch piles, PG&E will take additional measures to reduce the sound impacts below established sound impact limits. Monitoring will continue at these locations and will only stop when noise is recorded on a continuing basis (one full day or approximately 2,000 strikes) below the thresholds established in Table 7 of the September 2022 Biological Assessment. PG&E will continue to implement these measures for all remaining 60-inch piles at the locations where they were implemented. Hydroacoustic monitoring will only occur when water depth is 3 feet or greater at mean lower low water to allow for adequate depth for hydrophone placement. PG&E will report the results of the monitoring in their annual report using the NMFS Underwater Noise Monitoring Plan Template.	Maybe	Piles will be installed.				X																						
NOAABA-AMM-11:	RGP 40 NMFS BO	Pile removal will occur using either a vibratory hammer or direct pull method of extraction. A vibratory hammer/extraction must be attempted first unless it presents a greater risk of disturbance to sediments (i.e., contaminants are present). The direct pull method will be utilized if it is more appropriate for the substrate type, pile length, and structural integrity of the piling	Maybe	Piles may be removed as part of this project.				X																						
NOAABA-AMM-12:	RGP 40 NMFS BO	Cofferdam removal will occur using either a vibratory hammer or direct pull method of extraction. A vibratory hammer/extraction must be attempted first unless it presents a greater risk of disturbance to sediments. The direct pull method will be utilized if it is more appropriate for the substrate type, pile length, and structural integrity of the piling.	Maybe	Cofferdams may be installed as part of the project.				X																						
APM AES-1: Restor	CDFW ITP Final EIR	Previously vegetated areas greater than 0.10 acre that are disturbed by the project will be recontoured to their approximate original conditions and reseeded with an appropriate native seed mix to minimize scarring.	Yes	This measure applies to all projects.																									
APM AES-3: Shield	CDFW ITP Final EIR	Construction activities will cease 30 minutes before sunset and will not begin prior to 30 minutes after sunrise, where feasible. Night work will be limited in extent, duration, and brightness, to the extent feasible. If temporary construction lighting is required, PG&E will use shielded construction light fixtures, or otherwise screen or direct lighting away from nearby residences except in the cases of emergency.	Yes	This measure applies to all projects.																									
APM AIR-1: Implen	CDFW ITP Final EIR	•PG&E will implement control measures to reduce construction-related fugitive dust. The following measures are based on BAAQMD's CEQA guidelines and are in conformance with fugitive dust control recommendations from the NSCAPCD and YSAQMD. •All exposed surfaces will be watered at a frequency adequate to maintain minimum soil moisture of 12%. Moisture content can be verified by lab samples or moisture probe. •All haul trucks transporting soil, sand, or other loose material off site will be covered. •All visible mud or dirt track-out onto adjacent public roads will be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. All vehicle speeds on unpaved roads will be limited to 15 miles per hour (mph). •All roadways, driveways, and sidewalks to be paved will be completed as soon as possible. Building pads will be laid as soon as possible after grading unless seeding or soil binders are used. •All excavation, grading, and/or demolition activities will be suspended when average wind speeds exceed 20 mph. •Wind breaks (e.g., trees, fences) will be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50% air porosity. •Vegetative ground cover (e.g., fast-germinating native grass seed) will be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established. •The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time will be limited. Activities will be phased to reduce the amount of disturbed surfaces at any one time. •All trucks and equipment, including their tires, will be washed off prior to leaving the site. •Site accesses to a distance of 100 feet from the paved road will be treated with a 6- to 12-inch compacted layer of wood chips, mulch, or gravel. •Sandbags or other erosion control measures will be installed to prevent silt runoff to public roadways from sites with a slope greater than 1%.	Yes	This measure applies to all projects that involve ground disturbance applies to all projects.																									
APM CR-1: Invento	CDFW ITP Final EIR	As part of the screening process described in Chapter 2, Project Description, PG&E will continue to review historical and archaeological resources that were previously recorded, as well as structures that meet the 50-year threshold throughout the 30-year duration of ITP. If any resources have the potential to be eligible for listing on the CRHR or NRHP, PG&E will determine whether project activities will affect the resources and, if the activities would cause a substantial adverse change in the resource, a qualified cultural specialist will coordinate with PG&E, the landowner, and California Department of Fish and Wildlife (CDFW) on the appropriate steps for evaluation, protection, documentation and/or preservation of the resource.	Yes	This measure applies to all projects that involve ground disturbance.																									

APM CR-2: Provide	CDFW ITP Final EIR	The following procedures will be implemented prior to commencement of any project-related construction activities: All PG&E, contractor, and subcontractor project personnel will receive training regarding: •Appropriate work practices necessary to effectively implement the APMs and to comply with the applicable environmental laws and regulations. •The potential for exposing subsurface cultural resources and paleontological resources. •How to recognize possible buried cultural and paleontological resources. •Site-specific physical conditions to improve hazard prevention and, if applicable, a review of the stormwater pollution prevention plan, which will also address spill response. •Contact information for the project (i.e., environmental planner who will reach out to the appropriate resource specialist, such as archaeologists, paleontologists, cultural resources monitors, or tribal monitors, as needed. This training will include a presentation of: •Procedures to be followed upon discovery or suspected discovery of historic or archaeological materials, including Native American remains and their treatment. •Procedures to be followed upon discovery or suspected discovery of paleontological resources. •Procedures to be followed for spill and other hazard prevention. •Actions that may be taken in the case of violation of applicable laws	Yes	This measure applies to all projects that involve ground disturbance.																											
APM CR-3: Inadver	CDFW ITP Final EIR	The following procedure will be employed if a previously undocumented cultural resource is encountered during construction: •All work within 100 feet (30 meters) of the find will be halted or redirected by the construction foreman and protective barriers or flagging will be installed along with signage identifying the area as an "environmentally sensitive area." Entry into the area will be limited to PG&E approved/qualified CRSs, PG&E, and other authorized personnel. •PG&E and the CPUC will be notified immediately. •A qualified archaeologist will document the resource and coordinate with PG&E, the landowner, and the CPUC on the appropriate steps for evaluation and preservation of the find. The level of effort will be based on the size and nature of the resource, as determined by the archeologist and approved by the CPUC. •No work will occur within the environmentally sensitive area until clearance has been granted by the archaeologist or PG&E and the CPUC Environmentally sensitive area flagging and signage will only be removed when authorized by PG&E or the archaeologist and the CPUC.	Yes	This measure applies to all projects that involve ground disturbance.																											
APM CUL-4: Discov	CDFW ITP Final EIR	The following procedures will be implemented in the event of the discovery of human remains, in compliance with California law, including, but not limited to, the following provisions: CEQA Guidelines Section 15064.5(e); Public Resources Code Sections 5097.94, 5097.98, and 5097.99; and California Health and Safety Code Section 7050.5: Work in the immediate area within 100 feet of the find will be halted and the PG&E archaeologist, County Coroner, and CPUC will be notified immediately. Work will remain suspended until the Coroner can assess the remains. In the event the remains are determined to be prehistoric in origin, the Coroner will notify the NAHC within 24 hours, which will then identify an MLD. The MLD will consult with PG&E's archaeologist within 48 hours of notification to determine further treatment of the remains.	Yes	This measure applies to all projects that involve ground disturbance.																											
APM CUL-5: Undisc	CDFW ITP Final EIR	The following procedure will be employed (after stopping work and following the procedure for determining eligibility in APM CUL-2) if a resource is encountered and determined by the project's qualified archaeologist to be potentially eligible for the CRHR or a local register of historic resources and is associated with a California Native American Tribe(s) with a traditional and cultural affiliation with the geographic area of the proposed project: •The project's qualified archaeologist will notify the CPUC for appropriate action. PG&E will assist the CPUC if needed to identify the lead contact person for the California Native American Tribe(s) potentially associated with the cultural resource and with a traditional and cultural affiliation with the geographic area of the proposed project. The CPUC will contact the lead contact person to set up a meeting with PG&E and the CPUC. •The project's qualified archaeologist will participate with the CPUC in discussions with the California Native American Tribe(s) to determine whether the resource is a TCR as defined by Public Resources Code Section 21074, and the tribe(s)' preferred method of mitigation, if the resource is determined to be a TCR. If no agreement can be reached for mitigation after discussions with the California Native American Tribe(s) or it is determined that the tribe(s)' preferred mitigation is not feasible, PG&E will consult with the CPUC and implement one of the example mitigation measures listed in Public Resources Code Section 21084.3(b), or other feasible mitigation.	Yes	This measure applies to all projects that involve ground disturbance.																											
APM GEO-1: Protec	CDFW ITP Final EIR	If potential paleontological resources are discovered during construction activities, work will stop within 100 feet and the project paleontologist, who meets the minimum qualification standards established by the Society for Vertebrate Paleontology, will be contacted immediately. If the discovery is determined to be significant, PG&E will implement measures to protect and document the paleontological resource, as directed by the paleontologist in consultation with the landowner, PG&E, and California Department of Fish and Wildlife. Efforts will be made to retain and protect such resources in place. If recovery of those resources is required to prevent their destruction, the paleontologist will develop a recovery strategy at a level appropriate to the discovery and in accordance with industry practice. The paleontologist will supervise the recovery effort, which may include the following components as appropriate to reduce impacts to a less-than-significant level: establishing recovery standards, preparing specimens for identification and preservation, documentation and reporting, and securing a curation agreement from the approved agency. Work may not resume within 100 feet of the find until approval by the paleontologist.	Yes	This measure applies to all projects that involve ground disturbance.																											
APM GEO-2: Provid	CDFW ITP Final EIR	PG&E will provide environmental awareness training on paleontological resources protection when in areas with known or discovered resources. This training will include: types of paleontological resources that could occur at the project site; types of soils or lithologies in which the paleontological resources could be preserved; procedures that should be followed in the event paleontological resources are discovered; and penalties for disturbing paleontological resources.	Yes	This measure applies to all projects that involve ground disturbance.																											
APM HAZ-1: Spill R	CDFW ITP Final EIR	PG&E will implement its hazardous substance control and emergency response procedures as needed. The procedures identify methods and techniques to minimize the exposure of the public and site workers to potentially hazardous materials during all phases of construction through operation. They address worker training appropriate to the site worker's role in hazardous substance control and emergency response. The procedures also require implementing appropriate control methods and approved containment and spill-control practices for construction and materials stored on site. If it is necessary to store chemicals on site, they will be managed in accordance with all applicable regulations. Material safety data sheets shall be maintained and kept available on site, as applicable. In the event that soils suspected of being contaminated (on the basis of visual, olfactory, or other evidence) are removed during site grading activities or excavation activities, the excavated soil will be tested and, if contaminated above hazardous waste levels, will be contained and disposed of at a licensed waste facility. The presence of suspected contaminated soil will require testing and investigation procedures to be supervised by a qualified person, as appropriate, to meet state and federal regulations. All hazardous materials and hazardous wastes shall be handled, stored, and disposed of in accordance with all applicable regulations, by personnel qualified to handle hazardous materials. The hazardous substance control and emergency response procedures include, but are not limited to, the following: •Proper disposal of potentially contaminated soils. •Establishing site-specific buffers for construction vehicles and equipment located near sensitive resources. •Emergency response and reporting procedures to address hazardous material spills. •Stopping work and contacting the local fire department or other agencies as appropriate. Work will resume after any necessary consultation and approval by the local fire department. •Emergency-spill response and clean up kits will be on site where they are immediately available to respond to an accidental release of a hazardous fluid or material. If applicable, a Stormwater Pollution Prevention Plan (SWPPP) will be implemented, which will also address spill response and other site-specific physical conditions to improve hazard prevention.	Yes	This measure applies to all projects.																											
APM HAZ-2: Vehicl	CDFW ITP Final EIR	No vehicles or heavy equipment will be refueled within 100 feet of a wetland, stream, or other waterway, or within 250 feet of vernal pools, unless secondary containment is used. The fueling operator must always stay with the fueling operation. Tanks may not be topped off.	Yes	This measure applies to all projects.																											
APM NOI-1: Restric	CDFW ITP Final EIR	Planned construction activities within 900 feet of occupied residential parcels that require the use of off-road construction equipment will be consistent with local noise ordinance guidelines, which typically limit construction noise to daylight hours, or a similar restriction. Should work in these locations be required outside of these hours due to safety or clearance requirements, construction would will be limited to the minimum necessary and would will proceed as expediently as safely possible to reach a safe and convenient stopping point.	Yes	This measure applies to all projects, as applicable. The project is within 900 feet of occupied residential parcels.																											
APM NOI-2: Limit n	CDFW ITP Final EIR	PG&E will use "quiet" equipment (i.e., equipment designed with noise control elements), standard equipment fitted with noise control devices (e.g., mufflers), or other noise-reduction measures as feasible to limit construction noise to within local noise ordinance limits whenever feasible and within 250 feet of occupied residences.	Yes	This measure applies to all projects, as applicable. The project is within 250 feet of occupied residences.																											
APM TRA-1: Implen	CDFW ITP Final EIR	PG&E will continue to implement the following transportation best management practices. •Prepare and implement Traffic Control Plans as required by necessary encroachment permits to minimize disruption of roadways and of bicycle, pedestrian and transit routes to ensure the provision of adequate alternative access. •Provide through access for emergency vehicles at all times. If lane closures must occur during the course of construction, local fire and police departments will be notified to allow the design of alternative evacuation and emergency access routes. PG&E will make every effort to allow emergency service providers adequate lead time to ensure that emergency access and response times are maintained during work periods. •Maintain access for private roads. •Provide adequate off-road parking and staging for vehicles, equipment, and materials throughout the work period. •Restrict all construction parking and staging to ROW, utility-owned property and approved staging areas, and keep construction equipment in designated staging areas when not in use. •Post construction warning signs in advance of activities at the construction area and at intersections that provide access to the construction area. •Restrict all nonemergency construction traffic, including haul and delivery trucks, to normal daytime business hours, unless a local jurisdiction identifies a need for off-hours routing to avoid impacts on peak-hour commute traffic. •Avoid key commute routes and "rate-limiting" intersections during peak traffic periods, either by traveling different routes or by traveling during non-peak times as feasible, and by providing adequate parking for expanded facilities. •If temporary lane closures are required, use caution signs and/or flaggers to regulate traffic, cyclists, and pedestrians to maintain a safe transportation corridor.	Yes	This measure applies to projects that involve road encroachment and encroachment permits.																											

APM FIRE-1: Const	CDFW ITP Final EIR	PG&E will implement the following fire prevention practices at active construction sites. •During Red Flag Warning events, as issued daily by the National Weather Service, all construction activities will cease, with an exception for transmission line testing, repairs, unfinished work, or other specific activities that may be allowed if the facility/equipment poses a greater fire risk if left in its current state. •All construction crews and inspectors will be provided with radio and cellular telephone access that is operational in all work areas and access routes to allow for immediate reporting of fires. Communication pathways and equipment will be tested and confirmed operational each day prior to initiating construction activities at each work site. All fires will be reported to the fire agencies with jurisdiction in the area immediately upon discovery of the ignition. •Construction personnel will be trained in fire-safe actions, initial attack firefighting, and fire reporting. Construction personnel will be trained and equipped to extinguish small fires in order to prevent them from growing into more serious threats. •All construction personnel will carry a laminated card and be provided a hard hat sticker that list pertinent telephone numbers for reporting fires and defining immediate steps to take if a fire starts. Information on laminated contact cards and hard hat stickers will be updated as needed and redistributed to all construction personnel prior to the day the information change goes into effect. •Construction personnel will have fire suppression equipment on all construction vehicles and will be required to park vehicles away from dry vegetation. PG&E will coordinate with applicable local fire departments prior to construction activities to determine the appropriate amounts of fire equipment to be carried on vehicles and, should a fire occur, to coordinate fire suppression activities. •Water tanks and/or water trucks will be sited or available at active project sites for fire protection during construction.	Yes	This measure applies to all projects.																									
Description of Direct and Indirect Impacts to Waters of the State	WDR and CWA Section 401 WQC	The Permittee should describe all proposed project features, including those potentially offsite and/or adjacent to waters of the state which could result in impacts to waters of the state, in the Notice of Intent (NOI- Attachment B), which must be completed for authorization under this Order.	Yes	This measure applies to all projects impacting jurisdictional waters.																									
Avoidance and Min	WDR and CWA Section	Projects that receive Water Board authorization must demonstrate that impacts to waters of the state are first avoided, and then minimized, to the greatest extent practicable.	Yes	This measure applies to all projects impacting jurisdictional waters.																									
Compensatory Mit	WDR and CWA Section	As determined by the appropriate Regional Water Board, the Permittee is required to provide compensatory mitigation to compensate for permanent, temporary, direct and/or indirect impacts	Yes	This measure applies to all projects impacting jurisdictional waters.																									
Reporting and Noti	WDR and CWA Section	Request for Authorization. The Permittee shall submit a complete NOI for authorization under this Order at least 45 days before any project activity. The NOI shall describe all proposed project impacts to waters of the state and project design steps taken to first avoid, and then minimize, impacts to waters of the state to the maximum extent practicable. The NOI shall also include a delineation of waters of the state within impact sites. The NOI must provide all information requested in NOI Attachment B. The NOI must be provided on the NOI form found in Attachment B until an electronic application form is available on the State Water Board's webpage, at which time electronic submission will be required. An application fee must be provided with each NOI. The application fee amount is determined as required by the California Code of Regulations, title 23, sections 3833(b)(3) and 2200(a)(3).	Yes	This measure applies to all projects impacting jurisdictional waters.																									
Reporting and Noti	WDR and CWA Section	The Water Boards shall determine whether the activity is eligible for Order coverage. The Water Boards will require the Permittee to apply for individual or general authorization where the activity would not comply with an applicable water quality control plan or policy even if coverage would otherwise be authorized by this Order. The Permittee may choose to apply for an individual water quality authorization.	Yes	This measure applies to all projects impacting jurisdictional waters.																									
Reporting and Noti	WDR and CWA Section	a.Commencement of Construction. The Permittee shall submit a Commencement of Construction Report at least seven (7) days prior to start of initial ground disturbance activities and, if applicable, corresponding Waste Discharge Identification Number (WDID) issued under the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ or 2022-0057-DWQ; NPDES No. CAS000002). b.Project Reporting. The Permittee shall submit an Annual Report unless a Quarterly Report is required by Water Board staff in the project's Notice of Applicability. Project reporting shall continue until the Water Board issues a Notice of Project Complete Letter to the Permittee. c.Request for Notice of Project complete Letter. The Permittee shall submit a Request for Notice of Project Complete Letter when construction and any post- construction monitoring is complete, mitigation	Yes	This measure applies to all projects impacting jurisdictional waters.																									
Reporting and Noti	WDR and CWA Section	Conditional Notifications and Reports a.Accidental Discharges of hazardous materials*. Following an accidental discharge of a reportable quantity of a hazardous material, sewage, or an unknown material, the following applies (Water Code, Section 13271): i.As soon as the Permittee has knowledge of the discharge or noncompliance, notification is possible, and notification can be provided without substantially impeding cleanup or other emergency measures then: 1.First call – 911 (to notify local response agency) 2.Then call – Office of Emergency Services (OES) State Warning Center at: (800) 852-7550 or (916) 845-8911 3.Lastly, follow the required OES procedures as set forth in the Office of Emergency Services' Accidental Discharge Notification Web Page ii.Following notification to OES, the Permittee shall notify the appropriate Water Board, as soon as practicable (ideally within 24 hours). Notification may be delivered via written notice, email, or other verifiable means. iii.Within five (5) working days of notification to the Water Board, the Permittee must submit an Accidental Discharge of Hazardous Material Report. b.Violation of Compliance with Water Quality Standards. i.The permittee shall notify the water board within three working days of any event causing a violation of compliance with water quality standards. Notification may be delivered via written notice, email, or other verifiable means. ii.This notification must be followed within 3 working days by submission of a Violation of Compliance with Water Quality Standards Report. c.In-Water Work and Diversions. i.If required by the Water Board, the permittee shall notify the Water Board at least forty-eight hours prior to initiating work in water or installation of stream diversions. Notification may be delivered via written notice, email, or other verifiable means. ii.If required by the water board, within seven working days following completion of in-stream water work or stream diversions, an in-water work/diversions water quality monitoring report must be submitted to water board staff. d.Modifications to Project. The Permittee shall give advance notice to Water Board staff if project implementation as described in the NOI is altered in any way or by the imposition of subsequent permit conditions by any local, state, or federal regulatory authority by submitting a Modifications to Project Report. Project modifications that may prevent compliance with this Order are prohibited. e.Transfer of Long-term BMP Maintenance. If maintenance responsibility for post-construction BMPs is legally transferred, the permittee must submit to the Water Board a copy of such documentation and must provide the transferee with a copy of such documentation and must provide the transferee with a copy of a long-term BMP maintenance plan that complies with manufacturer or designer specifications. The Permittee must also provide such notification to the Water Board with a Transfer of Long-term BMP maintenance Report at least 10 days prior to the transfer of BMP maintenance responsibility.	Yes	This measure applies to all projects impacting jurisdictional waters.																									
Water Quality Mon	WDR and CWA Section	General: If surface water is present, continuous visual monitoring shall be conducted during active construction to detect accidental discharge of construction related pollutants (oil and grease, turbidity plume or uncured concrete).	Yes	This measure applies to all projects impacting jurisdictional waters.																									
Water Quality Mon	WDR and CWA Section	In-Water Work or Diversions. For projects involving planned in-stream water work or stream diversions, an in-water work/stream diversion and water quality monitoring plan shall be submitted with the NOI. Water quality monitoring shall be conducted in accordance with the approved plan.	Yes	This measure applies to all projects impacting jurisdictional waters.																									
Water Quality Mon	WDR and CWA Section	Accidental Discharges/ Noncompliance. If an accidental discharge occurs, the permittee shall determine whether the discharge includes hazardous materials or will cause or contribute to an exceedance of water quality objectives, and if so, notify the water board in accordance with IX.A.4.a. Water board Staff may require additional water quality monitoring based on the discharge constituents and/or related water quality objectives and beneficial uses.	Yes	This measure applies to all projects impacting jurisdictional waters.																									
Water Quality Mon	WDR and CWA Section	Post-Construction. For activities that result in exposed soil in or on the banks of waters and that have not received a Notice of Project Complete Letter, the Permittee will visually inspect the project site between October 30 and Apil 15 or as required in the approved restoration plan following each rain event that results in 0.5 inch of rainfall or more within a 48 hour period, until the permittee demonstrates that applicable erosion control BMPs are properly installed and the site is stabilized to prevent future erosion. The Permittee must demonstrate that excessive erosion, stream instability, and other water quality pollution is not occurring in or downstream of the project site. If water quality pollution is occurring, contact the Water Board staff member overseeing the project within three working days. The Water Board may require the submission of a Violation of Compliance with Water Quality Standards Report.	Yes	This measure applies to all projects impacting jurisdictional waters.																									
Standard Condition	WDR and CWA Section	This Order is conditioned upon total payment of any fee required under title 23 of the California Code of Regulations.	Maybe	Confirm whether the fee has been paid.																									
General Condition	WDR and CWA Section	Permitted actions must not cause a violation of any applicable water quality standards, including impairment of designated beneficial uses for receiving waters as adopted in the basin Plan by any applicable Regional Water Board, or any applicable Water Board water quality control plan or policy. The source of any such discharge just be eliminated as soon as practicable.	Yes	This measure applies to all projects impacting jurisdictional waters.																									
General Condition	WDR and CWA Section	The Permittee must conform to the engineering plans, specifications, and tech reports submitted with the application materials, per Water Code 13264	Yes	This measure applies to all projects impacting jurisdictional waters.																									
General Condition	WDR and CWA Section	The Permittee shall adhere to all requirements in the mitigation monitoring and reporting program (MMRP) (Pacific Gas and Electric Bay Area Operation and Maintenance Incidental Take Permit Mitigation Monitoring and Reporting Program, July 2022) which is incorporated herein by reference and any additional measures as outlined in Attachment E, CEQA Findings of Fact.	Yes	This measure applies to all projects impacting jurisdictional waters.																									

General Condition	WDR and CWA Section	Avoidance and Minimization: Projects authorized under this Order shall be designed to avoid and minimize impacts to waters of the state to greatest practicable extent.	Yes	This measure applies to all projects impacting jurisdictional waters.																								
Administrative Con	WDR and CWA Section	Signatory requirements for all document submittals required by this Order are presented in Attachment D of this Order	Yes	This measure applies to all projects impacting jurisdictional waters.																								
Administrative Con	WDR and CWA Section	Site Access: The Permittee shall grant Water Board staff, Regional Water Board staff or an authorized representative (including an authorized contractor acting as a Water Board representative), upon presentation of credential and other documents as may be required by law, permission to: a.Enter upon the project site premises where an activity is located or records are kept b.Have access to and copy any records that are kept and relevant c.Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required d.Sample or monitor for the purpose of assuring compliance	Yes	This measure applies to all projects impacting jurisdictional waters.																								
Administrative Con	WDR and CWA Section	The Permittee shall be responsible for work conducted by its consultants, contractors, and any subcontractors. A copy of this Order shall be provided to any consultants, contractors, and subcontractors working on the project. Copies of this Order and the project's Notice of Applicability shall remain at the project site for the duration of the project. All personnel performing work on the project shall be familiar with the content of this Order and the project's Notice of Applicability and its posted location at the project site.	Yes	This measure applies to all projects impacting jurisdictional waters.																								
Administrative Con	WDR and CWA Section	Lake and Streambed Alteration Agreement. The Permittee shall submit a signed copy of the California Department of Fish and Wildlife's Lake or Streambed Alteration Agreement (LSAA) to the Water Board prior to any discharge to waters of the state that requires an LSAA.	Yes	This measure applies to all projects impacting jurisdictional waters.																								
Construction Cond	WDR and CWA Section	All materials and supplies necessary for implementing these construction conditions must be on site and ready for use at the start of the construction activity and must remain in supply and ready for implementation throughout the construction process. All non-structural best management practice materials (e.g., training documents, compliance tracking procedures) must be ready for use at the start of construction.	Yes	This measure applies to all projects impacting jurisdictional waters.																								
Construction Cond	WDR and CWA Section	All personnel who engage in construction activities or their oversight at the Project site (superintendent, construction manager, foreman, crew, contractor, biological monitor, etc.) must attend trainings on the conditions of this Order and how to perform their duties in compliance with those conditions. Every person shall attend an initial training within five working days of their start date at the Project site. Trainings shall be conducted by a qualified individual with expertise in 401 Water Quality Certification conditions and compliance.	Yes	This measure applies to all projects impacting jurisdictional waters.																								
Construction Cond	WDR and CWA Section	Construction material, debris, rubbish, spoils, soil, silt, sawdust, rubbish, steel, welding slag, welding rods, waste material, waste containers, other organic or earthen material, or any other substances which could be detrimental to water quality or hazardous to aquatic life that is discharged as a result of project related activities shall be prevented from entering waters of the state. Spoils from excavations shall not be stored in waters of the state.	Yes	This measure applies to all projects impacting jurisdictional waters.																								
Construction Cond	WDR and CWA Section	Environmentally sensitive areas and environmentally restricted areas, including any avoided waters of the state, must be clearly identified in the field for exclusion prior to the start of construction. Such identification must be properly maintained until construction is completed and the soils have been stabilized. Equipment, materials, or any other substances or activities that may impact waters of the state outside of the limits of project disturbance are prohibited.	Yes	This measure applies to all projects impacting jurisdictional waters.																								
Construction Cond	WDR and CWA Section	Temporary materials placed in any water of the state must be removed as soon as construction is completed at that location, and all temporary roads must be removed or re-contoured and restored according to approved re-vegetation and restoration plans.	Yes	This measure applies to all projects impacting jurisdictional waters.																								
Construction Cond	WDR and CWA Section	A method of containment must be used below any temporary bridge, trestle, boardwalk, and/or other stream crossing structure to prevent any debris or spills from falling into the waters of the state. Containment must be maintained and kept clean for the life of the temporary crossing structure	Yes	The project is anticipated to use boardwalks for access.																								
Construction Cond	WDR and CWA Section	Vegetation removal shall be limited to the minimum necessary to complete the proposed operation and maintenance activities as listed in this section. This Order does not allow vegetation management removal as a standalone activity.	Yes	This measure applies to all projects impacting jurisdictional waters.																								
Construction Cond	WDR and CWA Section	Unless authorized for restoration, material excavated to prepare a site for placement of the permitted fill material must be properly disposed of in an upland area. The disposal site must be located at a sufficient distance away from flowing or standing water such that the excavated material does not erode or move in any way into any water of the state. The disposal area shall be identified in the project NOI.	Yes	This measure applies to all projects impacting jurisdictional waters.																								
Construction Cond	WDR and CWA Section	Topsoil: For any excavation, including utility line trenches, the top 6 to 12 inches of topsoil shall be removed and stockpiled separately during construction. Following installation, the topsoil shall be replaced and restored to preexisting conditions.	Yes	This measure applies to all projects impacting jurisdictional waters.																								
Construction Cond	WDR and CWA Section	Dust Abatement: Dust abatement chemicals added to water can be hazardous to wildlife and, if allowed to enter streams, detrimental to water quality. Therefore, dust abatement activities shall be conducted so that sediment or dust abatement chemicals are not discharged into waters of the state. Dust abatement products or additives that are known to be detrimental to water quality or wildlife shall not be used, unless specific management needs are documented, and product-specific application plans are approved by Water Board staff.	Yes	This measure applies to all projects impacting jurisdictional waters.																								
Construction Cond	WDR and CWA Section	Use of Mechanized Equipment. Activities permitted under this Order shall be conducted in a manner that minimizes ground disturbance, soil compaction, rutting and other mechanical impacts. Equipment shall be operated and maintained in a manner that reduces the risk of spills or the accidental exposure of fuels or hazardous materials to water bodies or wetlands.	Yes	This measure applies to all projects impacting jurisdictional waters.																								
Construction Cond	WDR and CWA Section	Access routes a.The number of access routes, number, and size of staging areas, and the total area of the ground disturbance shall be limited to the minimum necessary to achieve the project goal. b.Access routes that are intended for seasonal deactivation* or permanent decommissioning** shall be decommissioned as soon after use as possible, as follows: i. Access routes shall be in a condition that enables long-term, disconnected and maintenance-free drainage. ii.Drainages shall be fortified to endure the duration of planned decommissioning and prevent direct flows into waters. iii.Where feasible, a permanently decommissioned stream crossing shall be excavated to exhume the original, stable, stream bed and channel side-slopes, and then banks must be stabilized with materials	Yes	This measure applies to all projects impacting jurisdictional waters.																								
Construction Cond	WDR and CWA Section	a.Activities permitted under this Order shall not discharge toxic substances in concentrations that produce detrimental physiological responses to human, plant, animal, or aquatic life. CIPP formulations that have not been appropriately tested to demonstrate that they are not toxic to aquatic life that is likely to be present in the local watershed shall not be used in culvert rehabilitation projects. b.Discharge of unset cement, concrete, grout, slurry, damaged concrete spoils, concrete dust, or water that has contacted uncured concrete or cement, or related washout to surface waters, ground waters, or land is prohibited. If concrete washout is necessary at the site, washout containment shall be used to prevent any discharge. Wastewater may only be disposed by delivery to a sanitary wastewater collection system/facility (with authorization from the facility's owner or operator) or a properly licensed disposal or reuse facility. c.Appropriate BMPs must be implemented throughout project activities to prevent and control potential leaks/spills/drainage of potentially hazardous materials such as: non-petroleum hydraulic fluid; epoxies; paints and other protective coating materials; cement concrete or asphalt concrete; and washings and cuttings thereof. d.Activities permitted under this Order shall not discharge waste classified as "hazardous" as defined in California Code of Regulations title 22, section 66261 and Water Code section 13173. These BMPs shall include, at a minimum: i.All personnel handling fuels and other hazardous materials shall be properly trained. ii.Adequate spill prevention and cleanup equipment and materials shall be present on site at all times during project implementation. iii.All mechanized equipment shall be maintained in good operating order and inspected on a regular basis. iv.All on-site fuel trucks or fuel containers shall be stored in an area where risk of contamination of water bodies by leaks or spills is minimized. v.All equipment shall be fueled, maintained, and/or parked overnight in an upland area at least 100 feet from any delineated waters of the state. vi.Hazardous materials, including chemicals, fuels, and lubricating oils, shall not be stored within 100 feet of any delineated waters of the state, and shall be stored in appropriate containers with appropriate	Yes	This measure applies to all projects impacting jurisdictional waters.																								
Construction Cond	WDR and CWA Section	a.The Permittee is responsible for ensuring that all project personnel follow proper weed control practices, and that appropriate weed prevention measures are included in project plans. b.Any straw, hay or other unprocessed plant material used for any purpose must be certified or documented as being weed free. c.To prevent the spread of soil borne pathogens*, equipment must be cleaned prior to entering the site. Any equipment leaving the project area shall be thoroughly cleaned using methods appropriate for the known pathogen before leaving the project area, unless the Permittee documents that no known soil borne pathogen infestations are present within the project area. If equipment is to be cleaned on site, the cleaning station must be identified in the NOI and cannot be located within one-hundred feet of any waters of the state.	Yes	This measure applies to all projects impacting jurisdictional waters.																								

Construction Cond	WDR and CWA Section	Work in Delineated Waters of the State a.Work in waters of the state must not cause or contribute to an exceedance of water quality objectives in the receiving waters. Work in delineated waters commences at the onset of the regulated activity and continues until the activity is finished and all restoration of the affected work area is complete. The term "work" means any ground disturbing activities in any delineated waters of the state that are permitted under this Order, regardless of the presence or absence of flowing or standing water. b.All temporary dewatering activities are subject to the work-in-water reporting and monitoring conditions presented in the Water Quality Monitoring Section of this Order. c.Temporary diversions or impoundments of water, cofferdams, or similar structures installed for the purpose of temporarily dewatering work areas shall be performed according to the In-water Work/Stream Diversion and Water Quality Monitoring Plan provided by the Permittee, and approved by the appropriate Regional Water Board, including appropriate monitoring for water quality upstream and downstream of diversion structures as required in the Water Quality Monitoring section of this Order. d.All surface waters, including ponded waters, shall be diverted away from areas undergoing grading, construction, excavation, vegetation removal, and/or any other activity which may result in a discharge to waters of the state. e.Equipment may not be operated in standing or flowing waters unless implementing the following conditions: i.All construction activities must be effectively isolated from water flows to the greatest extent possible. This may be accomplished by working in the dry season or dewatering the work area. When work in standing or flowing water is required, structures for isolating the in-water work area and/or diverting the water flow must not be contaminated by construction activities. All open flow temporary diversion channels must be lined with filter fabric or other appropriate liner material to prevent erosion. Structures used to isolate the in-water work area and/or diverting the water (e.g., coffer dam, geotextile silt curtain) must not be removed until all disturbed areas are stabilized. ii.If groundwater dewatering is required for the project, the Permittee shall comply with applicable existing PG&E NPDES permit requirements. If additional Water Board dewatering permits are required, the designated Water Board staff contact must be notified and copied on pertinent correspondence pertaining to those other required permits. iii.All temporary dewatering and stream diversion methods shall be designed to have the minimum necessary impacts to waters of the state. All stream diversion methods shall be installed such that natural flow is maintained upstream and downstream of the diversion area. Any temporary dams or diversions shall be installed such that the diversion does not cause sedimentation, siltation, or erosion upstream or downstream of the diversion area. Diverted flows must be of sufficient quality and quantity, and of appropriate temperature, to support existing fish and other aquatic life both above and below the diversion. Pre-project flows must be restored to the affected surface water body upon completion of work at that location. All dewatering and stream diversion methods shall be removed immediately upon completion of activities for which dewatering or diversions are needed.	Yes	This measure applies to all projects impacting jurisdictional waters.																										
Restoration and M	WDR and CWA Section	The Permittee shall restore all areas of temporary impacts to waters of the state and all project site upland areas of temporary disturbance which could result in a discharge to waters of the state as described in a restoration plan approved by the appropriate Regional Water Board. The restoration plan shall be submitted to the appropriate Regional Water Board for review and approval with the NOI. The restoration plan shall provide the following: a schedule; plans for grading of disturbed areas to pre-project contours; a planting palette with plant species native to the project area; seed collection location; invasive species management; performance standards; and maintenance requirements (e.g., watering, weeding, and replanting).	Yes	This measure applies to all projects impacting jurisdictional waters.																										
Restoration and M	WDR and CWA Section	In cases where implementation actions in the restoration plan cannot be reasonably conducted within one year of impacts to waters of the state, or where the adverse temporary impacts result in temporary loss of aquatic resource function(s), the Permittee may be required to provide compensatory mitigation to offset temporal loss of waters of the state. Examples of additional mitigation include, but are not limited to, enhancement activities. such as increasing the presence of native species and reducing dominance of non-native/invasive species, native willow staking, planting of native riparian vegetation, and trash removal.	Yes	This measure applies to all projects impacting jurisdictional waters.																										
Restoration and M	WDR and CWA Section	The Water Board may extend the monitoring period beyond requirements of the restoration plan upon a determination by Water Board staff that the performance standards have not been met or are not likely to be met within the monitoring period	Yes	This measure applies to all projects impacting jurisdictional waters.																										
Mitigation for Perm	WDR and CWA Section	Compensatory mitigation is required to offset permanent impacts to waters of the state, unless the Permittee has demonstrated that the project authorized by this Order will restore or improve the ecological function of the impacted aquatic resource. Generally, compensatory mitigation shall take place within the same watershed as the impact site, but the permitting Water Board may approve compensatory mitigation in a different watershed or programmatic mitigation across one or multiple watersheds. Mitigation that occurs outside of the impacted watershed may require additional mitigation. When compensatory mitigation is required, the Permittee shall provide the following: a.A draft compensatory mitigation plan at a level of detail sufficient to accurately evaluate whether compensatory mitigation offsets the adverse impacts attributed to the project considering the overall size and scope of impact. b.Compensatory mitigation shall provide a minimum of a one-to-one mitigation to impact ratio, measured in area and length for mitigation banks, advanced mitigation, and in-lieu fee programs. Mitigation is required to ensure compliance with Executive Order W-59-93 that requires no net loss of the structure or function of California's wetland resources*. Mitigation should be in kind as much as is feasible. If mitigation is out-of-kind, the amount of mitigation should be increased. When mitigation is constructed, enhanced, or preserved offsite, the amount of mitigation should be increased to account for the distance between the impact site and the mitigation site. The amount of mitigation should also account for the uncertainty associated with the successful creation of a mitigation site. The Water Board will require a higher overall mitigation ratio where necessary to ensure replacement of lost aquatic resource functions and for permittee responsible mitigation conducted concurrently with impacts, subject to approval by the appropriate Regional Water Board. c.Subject to approval by the appropriate Water Board, mitigation may be satisfied using any of the following compensatory mitigation methods: restoration, enhancement, and/or establishment. d.No discharge of dredged or fill material to waters of the state shall occur prior to Water Board approval of a final mitigation plan covering the impacted site. The mitigation plan may be provided in advance of the identification of specific projects subject to Regional Water Board approval.	Yes	The project will impact jurisdictional waters.																										
General Condition	Dept. of the Army, RG	The time limit for completing the work authorized ends on December 31, 2027. If you* find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.	Yes	This measure applies to all projects impacting jurisdictional waters.																										
General Condition	Dept. of the Army, RG	You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.	Yes	This measure applies to all projects impacting jurisdictional waters.																										
General Condition	Dept. of the Army, RG	If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.	Yes	This measure applies to all projects impacting jurisdictional waters.																										
General Condition	Dept. of the Army, RG	If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.	Yes	This measure applies to all projects impacting jurisdictional waters.																										
General Condition	Dept. of the Army, RG	For your convenience, a copy of the water quality certification or waiver is attached (enclosure 2). If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit.	Yes	This measure applies to all projects impacting jurisdictional waters.																										
General Condition	Dept. of the Army, RG	You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.	Yes	This measure applies to all projects impacting jurisdictional waters.																										
General Condition	Dept. of the Army, RG	You understand and agree that, if future operations by the United States require the removal, relocation or other alteration of the structure or work authorized herein, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, you will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.	Yes	This measure applies to all projects impacting jurisdictional waters.																										
Special Condition 1	Dept. of the Army, RG	To remain exempt from the prohibitions of Section 9 of the Endangered Species Act, the non-discretionary terms and conditions for incidental take of federally-listed species shall be fully implemented as stipulated in the Biological Opinions from US Fish and Wildlife Service (USFWS) titled "Final Programmatic Formal Consultation for the Pacific Gas and Electric Company's (PG&E) Bay Area Operation and Maintenance (O&M) Program in Alameda, Contra Costa, Marin, Napa, Santa Clara, San Francisco, San Mateo, Solano, and Sonoma Counties, California" (USFWS file # 08FBDT00-2020-F-0197), dated August 6, 2021 (enclosure 3), and from National Marine Fisheries Service (NMFS) titled "Endangered Species Act Section 7(a)(2) Biological Opinion and Magnuson–Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the Pacific Gas and Electric Company's Bay Area Operation and Maintenance Program" (NMFS file # WCRO- 2021-028), dated April 6, 2023 (enclosure 4). Projects shall also follow all applicable provisions of the 2017 Habitat Conservation Plan (HCP) and associated Incidental Take Permit (ITP) for the PG&E Bay Area O&M Program. Project authorization under this permit is conditional upon compliance with the mandatory terms and conditions associated with incidental take. Failure to comply with the terms and conditions for incidental take, where a take of a federally-listed species occurs, would constitute an unauthorized take and non-compliance with the authorization for your project. The USFWS and or NMFS are however, the authoritative federal agency for determining compliance with their incidental take statements and for initiating appropriate enforcement actions or penalties under the Endangered Species Act.	Yes	The project will impact jurisdictional waters and is located within potential endangered species habitat.																										
Special Condition 3	Dept. of the Army, RG	USACE initiated consultation with NMFS to address project related impacts to Essential Fish Habitat (EFH). The conservation recommendations listed on page 85 of the NMFS Biological Opinion (enclosure 4) shall be implemented as follows: a.EFH recommendations 1 and 2 shall be fully implemented by following all non-discretionary terms and conditions for incidental take of federally-listed species, as required in special condition 1. b.To be consistent with EFH recommendation 3, PG&E shall perform hydroacoustic monitoring at a minimum of 2 sites per calendar year, on a minimum of 8 total piles when an impact hammer is utilized on steel piles between 20 inches and 60 inches diameter in water depths greater than 3 feet at MLLW, and when a coffer dam is not used to dewater the site prior to piledriving. If PG&E uses an impact hammer to install 20-60 inch piles at only one site and/or less than 8 total piles in a calendar year, then all piles installed under these conditions shall be hydro-acoustically monitored. Monitoring results shall be included along with other required hydroacoustic monitoring results in PG&E's annual report to NMFS and USFWS.	Maybe	If an impact hammer meeting the specifications is used, this measure would apply.																										

Special Condition 4	Dept. of the Army, RGF	For all projects proposed for authorization under this RGP, PG&E shall submit digital copies of project information to USACE, USFWS, and NMFS at least 45 days prior to any planned project activities. The project submissions shall include copies of the pre-construction notification/notice of intent (PCN-NOI) form for the PG&E Bay Area O&M Program (enclosure 5), detailing the types of activities planned, anticipated dates of commencement and completion, locations and descriptions of the proposed projects, project drawings or design plans, and summary of impacts to streams, wetlands, or other waters including proposed dewatering, grading, or other temporary or permanent fill discharge for each project. The project information submitted to USACE shall also include the latest version of the USACE ORM Aquatic Resources and Consolidated Upload Spreadsheet, using the Aquatic Resources tab and Impacts tab to provide required information for all proposed projects, including details on the aquatic resources and proposed fill impacts for each project.	Yes	This measure applies to all projects impacting jurisdictional waters.																												
Special Condition 5	Dept. of the Army, RGF	PG&E shall provide a summary of cultural resource information for each project area, including surrounding archaeological sensitivity, and any known or suspected historic property, tribal cultural property, or other cultural resource within project areas. For any proposed project with the potential to affect a historic property, PG&E shall include sufficient information for USACE to initiate consultation with the State Historic Preservation Officer under section 106 of the National Historic Preservation Act. In the event any previously unknown historic, cultural or archeological remains or artifacts are discovered while conducting an activity authorized by this RGP, PG&E must immediately notify USACE of the discovery and avoid further activities that may affect the resource until the required section 106 coordination has been completed.	Yes	This measure applies to all projects impacting jurisdictional waters.																												
Special Condition 8	Dept. of the Army, RGF	For purposes of compensatory mitigation required by USACE under this RGP, the program area is divided into 4 mitigation regions: North Bay (Marin, Sonoma, Napa, and Solano Counties); East Bay (Contra Costa and Alameda Counties); Peninsula (San Francisco and San Mateo Counties); and South Bay (Santa Clara County). If the overall permanent impacts within any one mitigation region exceeds 0.1 acre within the 5- year period of this RGP, compensatory mitigation shall be required for all permanent impacts to waters of the U.S. within that mitigation region. Should the overall permanent impacts to waters of the U.S. within any mitigation region be anticipated to exceed 0.1 acre, a mitigation plan compliant with the 2008 mitigation rule shall be submitted for all impacts cumulatively greater than 0.1 acre in that mitigation region. Proposed compensatory mitigation shall ensure no overall net loss in quantity or quality of waters of the U.S., and shall occur within the same region as the impacts.	Yes	This measure applies to all projects impacting jurisdictional waters.																												
Special Condition 9	Dept. of the Army, RGF	Compensatory mitigation for permanent impacts to waters of the U.S. may include enhancement, rehabilitation, establishment, or reestablishment of waters of the U.S. Preservation of particularly rare or threatened aquatic resources may only be considered if proposed in combination with other forms of mitigation. Compensatory mitigation for permanent impacts to waters of the U.S. shall be commensurate with the amount and type of impacts that have occurred/are proposed to occur under the O&M Program. Invasive plant removal and native plant establishment alone may not be considered acceptable mitigation for permanent impacts to waters of the U.S. but may be included as part of a larger mitigation plan.	Yes	This measure applies to all projects impacting jurisdictional waters.																												
Special Condition 1	Dept. of the Army, RGF	PG&E shall be responsible for monitoring any permittee-responsible mitigation for a minimum of 5 years depending on the mitigation project. Mitigation sites involving revegetation shall be monitored by a qualified biologist or vegetation specialist to evaluate successful establishment and survival of plantings. Monitoring and reporting will be compliant with the 2008 mitigation rule. Any mitigation required by USACE will not be considered fulfilled until you have submitted documentation of final mitigation success, and have received written verification from USACE.	Yes	This measure applies to all projects impacting jurisdictional waters.																												
AMM -01	RGP 40 FWS BO	O&M activities within 600 feet of actively nesting California least tern (CLT) will not be conducted during the breeding season (March 1 through August 31). Work will occur within the limited operating period of September 1 through February 28 or 29 if CLT are nesting within 600 feet.	Yes	The Project area contains western snowy plover critical habitat.								X																		
AMM -02	RGP 40 FWS BO	No O&M activities will be performed within 600 feet of an active western snowy plover (WSP) nest or brood during the WSP breeding season (March 1 through September 14). Work will occur within the limited operating period of September 15 through February 28 or 29 if WSP are nesting within 600 feet. Vehicles driving on levees and pedestrians walking on boardwalks or levees will remain at least 600 feet away from WSP nests and broods. If WSP chicks are present near any levee that will be accessed by vehicles (e.g., for construction, inspection, or access), vehicle use will be under the supervision of a qualified biologist to ensure that no chicks are present within the path of the vehicle.	Yes	The Project area contains western snowy plover critical habitat.								X																		
AMM -03	RGP 40 FWS BO	Helicopter flight paths will avoid active CLT colonies and WSP nests. Helicopter landings will take place on existing levees or roads. No landings in tidal marshes are permitted	Yes	The Project area contains western snowy plover critical habitat.								X																		
AMM -01	RGP 40 FWS BO	For the palmate-bracted bird's-beak and soft bird's-beak, PG&E will create Map Book Zones and implement Plant-04 to be consistent with the HCP.	Maybe	This measure applies to palmate-bracted bird's-beak and soft bird's-beak. No habitat for these species is present within the project area.																										
BA-AMM-01: Hazar	RGP 40 FWS BO	equal to or greater than the following: •500 pounds of a solid, •55 gallons of a liquid, •200 cubic feet of a compressed gas, •a hazardous compressed gas in any amount, and •extremely hazardous substances above planning quantities. PG&E or its contractor will prepare an HMBP, as stated previously, prior to beginning the following O&M activities: •installation of pig launcher/receiver facilities, •valve/pipeline excavation and recoating, •valve replacement/automation, •hydrostatic testing, and •pipeline segment replacement. The HMBP (or the Project's Environmental Release to Construction if there is no HMBP) will be implemented to prevent the release of hazardous materials and hazardous waste and will include the following requirements and procedures: •training requirements for workers in appropriate work practices, including spill prevention and response and identification of potentially hazardous contamination (e.g., stained or discolored soil and odor); •requirements for storage and containment of all hazardous materials at work sites and proper handling of all such materials; •requirements for storing hazardous materials on pallets or in appropriate containers within designated fenced and secured areas protected from exposure to weather and further contamination; •requirements for maintaining hazardous material spill kits at all active work sites and staging areas and thorough cleanup of all spills as soon as they occur; and	Maybe	This measure applies to all projects, as applicable.																												
BA-AMM-02: Vehic	RGP 40 FWS BO	To prevent the spread of invasive weeds through seed, all equipment (e.g., excavators, graders, boats, barges, etc.) will be carefully cleaned before arriving on site to prevent spread of these and other invasive plants.	Yes	This measure applies to all projects.																												
BA-AMM-03: Repo	RGP 40 FWS BO	Encounters with listed species will be reported to the PG&E Project Biologist within 24 hours.	Yes	This measure applies to all projects.																												
USFWSBA-AMM-01	RGP 40 FWS BO	PG&E will make every effort to utilize weed-free materials (e.g., mulch, straw, hay bales, or equivalent).	Yes	This measure applies to all projects.																												
USFWSBA-AMM-02	RGP 40 FWS BO	Boardwalk planks will be spaced with gaps that are a minimum of 0.5 inch wide to allow sunlight to reach wetland vegetation.	Maybe	If boardwalks are constructed or modified as part of the proposed project, this measure would apply.																												
USFWSBA-AMM-03	RGP 40 FWS BO	Helicopter flight paths will avoid active California least tern (Sternula antillarum browni) colonies and western snowy plover (Charadrius alexandrinus nivosus) nests. Helicopter landings will take place on existing levees or roads. No landings in tidal marshes are permitted.	Yes	The Project area contains western snowy plover critical habitat.																												