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# 2.0 PROJECT DESCRIPTION

North Bay Interconnect, LLC and Corby Energy Storage, LLC (Applicant)[1], propose to construct, own, and operate the Corby Battery Energy Storage System Project (Project). The Project will be constructed on an approximately 40.3-acre privately owned parcel in Solano County, California. The Project will include a 300-megawatt (MW), 1,200-megawatt-hour (MWh) battery energy storage system (BESS), associated Project substation, inverters, and other ancillary facilities, such as fencing, sound barrier, roads, optional groundwater well, water tank, stormwater retention basins, storage containers, and a supervisory control and data acquisition (SCADA) system.

The Project will connect to the Pacific Gas and Electric (PG&E) Vaca-Dixon Substation, northwest of the Project site and across Interstate (I) 80, via a 1.1-mile-long 230-kilovolt (kV) generation tie (gen-tie) line, portions of which would be installed overhead and underground. The underground portions of the gen-tie line will run east-west parallel to and crossing Kilkenny Road, either within acquired easements on adjacent parcels or within the City of Vacaville road right-of-way. The overhead portions will include two structures on the Project site, four structures between Kilkenny Road and I-80 on private land owned by the Applicant, and up to four structures north of I-80 on PG&E's Vaca-Dixon Substation property, for a total of up to 10 overhead gen-tie structures.

To accommodate the interconnection of the Project and other future projects, PG&E is currently performing network upgrades which include grading, construction of concrete pads, and relocating existing structures within the Vaca Dixon Substation. Specifically, for the Project and within the previously graded area within the Substation, PG&E will install a new 230-kV double bus bay structure with associated foundations and supports on approximately 0.6 acre of the existing substation. This New Corby Bay will house four switch support structures and associated equipment for the new 230-kV connection. In addition, PG&E will also construct, own, and operate the portion of the gen-tie between the point of change of ownership (POCO) and the New Corby Bay, including 5[2] of the 10 structures, to connect the Project to the Vaca-Dixon Substation.

The following description has been prepared to provide an overview of the facilities that are proposed to be constructed and operated for the Project.

## 2.1 Location of Facilities[3]

The Project site is situated roughly in the northwestern corner of Section 6, Township 6 North, Range 1 East, just outside the City of Vacaville, California, U.S. Geological Survey 7.5-minute topographic quadrangle at approximate latitude 38°23'32" N, longitude 121°54'27" W. The overhead portion of the gen-tie that connects the Project site to the Vaca-Dixon Substation is within Section 1, Township 6 North, Range 1 West.

The permanent operational facility, including the BESS array, Project substation, associated equipment, roads, fencing, sound barrier, optional groundwater well, water tank, and drainage facilities, will be

[1] North Bay Interconnect, LLC and Corby Energy Storage, LLC are both wholly-owned subsidiaries of NextEra Energy Resources. North Bay Interconnect, LLC will own and operate the interconnection facilities for the Project; and Corby Energy Storage, LLC will own and operate the BESS components of the Project.
[2] Following construction, ownership of the POCO structure south of I-80 will be transferred from PG&E to the Applicant, whereas the gen-tie line and structures between the POCO and Vaca-Dixon Substation will be owned and operated by PG&E.
[3] Appendix B (a) (1) (A)

located on an approximately 40.3-acre parcel (Project site). The Project site includes the entirety of the Project parcel (Assessor's Parcel Number [APN] 0141-030-090). The Project parcel is bound on all sides by existing agricultural lands, with a rural residence located across Kilkenny Road directly to the north. Additional rural residences also exist in the project vicinity, both to the south and west of the Project site. The Project site is located approximately 250 feet southeast of the City of Vacaville jurisdictional boundary, and approximately 5 miles northeast of the city center. I-80 is approximately 0.6 mile northwest of the Project site.

Refer to Figure 1-1 for the Project's location in the region, Figure 1-2 for the site location, and Figure 1-3 for the site layout.

## 2.2 Location of Offsite Facilities[4]

The energy will be transported from the Project substation to the nearby PG&E Vaca-Dixon Substation through a 1.1-mile-long 230-kV gen-tie transmission line sited on an approximately 19.4-acre gen-tie corridor. The first section of the gen-tie corridor will begin at the northwest corner of the Project site and will follow one of the following route options:

1. **Underground Route Option #1** would be located within easements secured from private landowners (APNs 0141-030-080 and 0141-010-030) and Solano Irrigation District (SID) and an encroachment permit from the City of Vacaville; this east-west portion of the gen-tie will be underground, crossing Kilkenny Road and an SID canal before turning 90 degrees and running east-west parallel to the canal.
2. **Underground Route Option #2** would be located within easements secured from the private landowner of the parcel immediately west of the Project site (APN 0141-030-080) and an encroachment permit from the City of Vacaville to install the gen-tie within the City-maintained Kilkenny Road right-of-way.

To the west of the initial east-west underground section (Option #1 or #2), the gen-tie corridor will run north-south up to I-80 with four overhead structures on two parcels that will be owned by the Applicant (APNs 0133-060-010 and 0133-060-020). The overhead gen-tie line will continue northwest across I-80, requiring crossing agreements between PG&E and both SID and the California Department of Transportation (Caltrans) for irrigation canal and I-80 crossings, respectively. Up to four overhead structures and the New Corby Bay will be sited on PG&E's Vaca-Dixon Substation parcel (APN 0133-060-070). The gen-tie corridor and New Corby Bay location are depicted on Figure 1-3.

The Applicant will design, construct, own, and operate the gen-tie from the Project substation to the POCO within the gen-tie corridor south of I-80. PG&E will be responsible for the portion of the gen-tie between the POCO and the point of interconnection (POI) at the PG&E Vaca-Dixon Substation, including the final five structures, the I-80 crossing, and the New Corby Bay. The gen-tie line and interconnection facilities are described in further detail in Section 3.0, *Electrical Transmission*.

In addition to the gen-tie, an offsite telecommunications line will be installed to connect the Project to the local network. No offsite water, sewer, or gas lines or connections will be constructed or required for the Project.

[4] Appendix B (a) (1) (A)

## 2.3 BESS Facility Description, Design, and Operation[5]

### 2.3.1 Site Selection[6]

Parcels within Solano County were evaluated based on the site requirements and additional screening criteria to assess site feasibility.[7]

The minimum site requirements consisted of the following:

- **Parcel size:** A parcel must be approximately 25 acres in size to allow design flexibility for a 300-MW project that includes batteries, inverters, transformers, Project substation, stormwater control, and fencing.
- **Distance from the Vaca-Dixon Substation:** The distance and corresponding gen-tie length must be minimized to minimize impacts, number of landowners, energy loss, and costs associated with gen-tie construction and operation. A site no more than 1 to 2 miles from the interconnection substation is the most desirable considering the tradeoff of energy losses and economic losses.

After consideration of the minimum site requirements above, additional screening criteria were established to assess site feasibility. These screening criteria relate to land use, economic, environmental, legal, social, or technological factors that influence whether the Project could be accomplished in a successful manner within a reasonable period of time (i.e., within 12 to 24 months). The screening criteria used for the purpose of site selection included consideration of parcel zoning, general plan land use designations, the presence of critical habitat, conserved lands, Federal Emergency Management Agency flood zones, existing development, the parcel slope, and the feasibility of securing easements for a gen-tie line.

### 2.3.2 Facility Components

The Project consists of the following components as depicted on the site plan (Figure 2-1) and elevation drawings (Figures 2-2a and 2-2b)[8,9]. Project substation site plan detail and elevation drawings are provided in Figures 3-5a through 3-5c in Section 3.0, *Electrical Transmission*.

- BESS;
- Onsite Project substation;
- Inverters;
- Gen-tie line; ~~and~~
- Telecommunications line;
- Optional groundwater well;
- Water tank; and
- Ancillary facilities.

[5] Appendix B (b) (1) (C)
[6] Appendix B (b) (1) (D)
[7] Appendix B (b) (1) (D)
[8] Appendix B (b) (1) (B)
[9] Appendix B (g) (6) (D) (i)

#### 2.3.2.1 Battery Energy Storage System[10]

The Project will use lithium-ion battery technology, which is considered one of the safest, most easily understood, and most efficient methods of energy storage on the market. Lithium-ion technology has a long lifespan and boasts superior safety and stability characteristics. The Applicant is proposing Model CBFAD batteries manufactured by Contemporary Amperex Technology Company (CATL). CATL's integrated all-in-one energy storage solutions feature safe, reliable lithium iron phosphate battery technology. The CATL EnerC+ model features a highly efficient system with safe and long lifecycle battery cells. Its compact mechanical design has a minimized footprint and provides high-energy density, while also integrating a local controller, thermal management system (TMS) for maintaining optimal temperatures.

The BESS will include multiple self-contained, prefabricated enclosure units in a parallel configuration with spacing between each unit as required by the manufacturer. Each of the enclosure units will be approximately 9.5 feet tall, 8 feet wide, and 20 feet long. Batteries will be placed within the BESS yard on native compacted soil, gravel, and underground steel piles or concrete foundations.

The initial BESS installation will include 384 BESS enclosures at the "beginning of life" (BOL). As batteries degrade over time, additional batteries will be installed every 2 to 3 years to replenish the system and maintain an overall 300-MW output. At the "end of life" (EOL), the Project will include up to 544 BESS enclosures. The site plan accounts for this augmentation activity and depicts both the BOL and EOL BESS arrays (Figure 2-1).

The enclosure units will contain lithium-ion batteries stored on racking and there will be no internal open space available for entry or occupation. All battery racking will be fully accessible from the exterior of the enclosure via external doors. Each enclosure unit will be equipped with a TMS for regulating the temperature of the batteries. Power to the TMS will be provided through a connection to the onsite station service transformer, with connection lines installed above and/or below ground.

Each enclosure unit will have a fire rating in conformance with the local fire authority and the correlating fire code. Additionally, the proposed Project will use designs and equipment that have undergone Underwriters Laboratories (UL) 9540A testing and meet other applicable UL and National Fire Protection Association (NFPA) standards. Moreover, the Project will comply with applicable fire code and standards, such as NFPA 855, California Fire Code 1207, and UL 9540. Collectively, these standards require exclusive use of batteries that are UL certified and built-in fail safes designed specifically to prevent thermal runaway and the spread of fire.

Only batteries that are UL certified and that include built-in fail safes designed specifically to prevent thermal runaway and the spread of fire will be used. This includes UL 9540A testing to validate their ability to limit a thermal runaway event. Additionally, the Project will adhere to the latest applicable codes, including NFPA 855. Continuous monitoring and detection systems will be included to meet California and Solano County fire code standards. Batteries are remotely operated and will be shut down automatically if abnormal conditions occur. Please see the design basis and major equipment specifications documents in Appendix 2-A for a complete listing of laws, ordinances, regulations, and standards (LORS) incorporated into the facility design.

[10] Appendix B (h) (3) (B)

**Figure 2-1. Site Plan**

**Figure 2-2a. Elevation Views Looking North and West**

**Figure 2-2b. Elevation Views Looking South and East**

#### 2.3.2.2 Inverters

The Project will install inverters with the BESS yards adjacent to the battery enclosures. The inverters convert between alternating current, which is used by the transmission grid, and direct current, which is used to charge and discharge the batteries. As depicted on Figure 2-1, the Project will initially include 96 inverters (BOL) and, following full augmentation, will be expanded to 136 inverters at EOL.

The Project will only use industry standard equipment that is recognized both nationally and internationally. These inverters are non-occupiable, standalone units that operate in all conditions. They operate in charge and discharge modes, are UL listed for bidirectional use, and are monitored and controlled remotely. There will be onsite disconnects in case of an emergency or unscheduled maintenance. In case of grid disturbance on PG&E's side, the inverters will not operate until they are remotely turned on or the grid instability is stabilized for a length of time. In discharge mode, the inverters will be turned on remotely and controlled by internal circuitry and power control software at the BESS. They are designed to last more than 30 years.

Remote monitoring will be provided by the Applicant's Fleet Performance and Diagnostics Center (FPDC). The FPDC provides remote operating, monitoring, and diagnostic services for thermal, solar, secondary nuclear, wind, and energy storage assets. For energy storage support, the FPDC provides 24-hour operational monitoring, diagnostics, and management of alarms as established by the Power Generation Division's engineering and operation teams. The locally based FPDC operators are trained to interact closely with other Power Generation Division engineering teams as needed to achieve resolution of operational issues.

#### 2.3.2.3 Project Substation

Underground or aboveground collector lines will transmit energy between the Project substation and the inverters within the BESS yards. The proposed substation will host the grid intertie safety equipment and switches required to interconnect to the high-voltage transmission system. The Project substation will include switchgear and additional electrical equipment as required by PG&E specifications. The associated transformers, control enclosure, and microwave tower will be located within the onsite substation area.

The Project substation will include three generator step-up transformers to step up the voltage of electricity from 34.5 kV to 230 kV for transmission to the Vaca-Dixon Substation or step down the voltage for storage in the BESS batteries.

Underground wires and cabling will run from the battery cable collection box (inside the structure or from enclosures) to a concrete pad housing the electrical equipment listed previously. All outside electrical equipment will be housed in the appropriate National Electrical Manufacturers Association rated enclosures and screened from view on all sides. Please see Section 3.2.3 of this Application for a more detailed description of electrical components and one-line diagram for the Project substation.

The Project substation will include an approximately 14-foot by 60-foot control enclosure housing the SCADA system. Auxiliary power required for the control enclosure and SCADA system will be provided by a connection to the local PG&E distribution system.

### 2.3.2.4 Telecommunications Line

The Project will include the construction of new telecommunications facilities within the Project site and along Kilkenny Road within the proposed gen-tie corridor outside of the Project site. The Applicant will construct an onsite telecommunications cabinet adjacent to the Project substation and will install underground fiber lines from this new cabinet to a splice point located within Kilkenny Road approximately 0.35 mile west of the Project site boundary, just south of where the proposed gen-tie line turns north from Kilkenny Road (see **Error! Reference source not found.**). These fiber lines will follow the gen-tie corridor and Underground Route Option #2 within Kilkenny Road, where they will connect to lines constructed, owned, and operated by AT&T, the local exchange carrier (LEC), at the splice point. The only telecommunications facilities proposed to be constructed by the Applicant will be within the Project site boundary and proposed gen-tie corridor for Underground Route Option #2. The LEC (AT&T) will install fiber within the right-of-way of Kilkenny Road to connect from the splice point to their existing facilities. The telecommunication line will be installed using micro trenching techniques, or boring where required, limiting ground disturbance to less than a foot in width and approximately 2 to 3 feet deep.

### ~~2.3.2.4~~2.3.2.5 Operations and Maintenance Facility

The Project will include operations and maintenance (O&M) equipment that will be stored in up to eight conex storage containers, each approximately 10 feet by 20 feet in size placed in open areas within the fenced BESS yard. Operational staff will perform periodic inspections and maintenance as needed using the containers for storage of non-hazardous materials, equipment and other O&M work as needed. ~~Enclosures used to store hazardous materials will be inspected regularly for any signs of failure or leakage.~~

### ~~2.3.2.5~~2.3.2.6 Ancillary Facilities

#### Site Access and Maintenance Roads

Site access will be provided via three new 24-foot-wide connections to Byrnes Road adjacent to the eastern Project site boundary, one for the Project substation and two for the BESS yard (see Figure 2-1~~).~~). Internal site maintenance roads will also be installed to allow access throughout the Project site during O&M. Maintenance roads will be placed between groups of BESS enclosures at sufficient frequencies to allow for routine maintenance and emergency access. All roads will be designed to comply with the superseding fire codes, measuring at least 20 feet wide with adequate turnarounds, graveled (or potentially asphalt paved depending upon final design), extending to within 150 feet of the farthest BESS container, and will be sufficient for local fire department and California Department of Forestry and Fire Prevention (or CAL FIRE) access.

#### Lighting

Low-elevation (i.e., less than 14-foot), controlled security lighting will be installed at ~~primary access gates and~~ the onsite substation. The lighting will only switch on when personnel enter the area (through either motion sensor or manual activation [i.e., switch]). Lighting features will only be installed in areas where it is required for safety, security, or operations. All lighting will be directed onsite and will include shielding as necessary to direct light downward and minimize illumination of the night sky or potential impacts to surrounding viewers.

**Perimeter Fence**

The perimeter of the BESS array and Project substation will be enclosed by a 6-foot-tall chain-link fence above grade topped with 1 foot of three-strand barbed wire to prevent unauthorized access to the site. Access onto the Project site will be controlled through entry/egress gates located along Byrnes Road.

**Sound Barrier**

A sound barrier will be used to reduce the sound levels at the nearby residential receivers north of the Project site. An approximately 15-foot-high by 785-foot-long sound barrier will be installed along the northern edge of the Project parcel to attenuate sound levels (see Figure 2-1). The proposed sound barrier will be a post and pre-cast panel system with a gray textured finish. Additional information is presented in Section 4.13, *Noise* and Appendix 4.13-B.

**Signage**

A sign no larger than 8 feet by 4 feet will be installed at the main entrance to identify the Project site. In addition, required safety signs (e.g., to identify high voltage) as well as information for emergency services will be installed on the fence near the entrance gate and within the premises, as required.

**Site Drainage**

The Project design incorporates onsite stormwater facilities, including a perimeter ditch and two retention basins to control facility runoff and ensure that future peak discharges from the Project site do not exceed the peak discharges for the 100-year, 24-hour storm under current conditions per Solano County's standards. The retention basins will be located east of the Project substation and southeast of the BESS array within the Project parcel, and onsite stormwater flows will be conveyed to the proposed retention basins via overland flow and a perimeter ditch. A preliminary grading plan showing site drainage is provided in Appendix 2-B. A pre- and post-construction hydrology and hydraulics analysis is provided in Appendix 4.10-A.

With the exception of equipment enclosures and potentially asphalt-paved site maintenance roads, most of the Project site will be surfaced with crushed rock, allowing infiltration.

Refer to Section 4.10, *Hydrology/Water Quality* for additional site drainage information.

**Landscaping**

A landscape strip will be planted along Kilkenny Road and Byrnes Road, as requested by the Solano County Planning Services Division in their preliminary Project review in 2023 (see Appendix 4.11-A). A 36-foot-wide landscape buffer comprising drought-tolerant and native vegetation will be used, and all landscaping will comply with the California Department of Water Resources Water Efficient Landscape requirements. Refer to Section 4.1, *Aesthetics,* and Appendix 4.1-B, *Landscape Plan,* for additional landscaping information.

### 2.3.3 Water Supply and Use

~~No water will be required for Project operations.~~The Project will require water during the initial 5 years of operation to support temporary landscape irrigation, and potential infrequent refilling of the proposed 24,000-gallon fire-water storage tank. However, no other operational water will be required.

BESS equipment will not require water supply. The Project will not have an O&M facility, will be operated remotely, and will not have permanent sanitary facilities. Temporary sanitary facilities will be procured when required to support onsite maintenance activities.

Limited water will be required for construction and operations. As discussed further in Section 2.4.5, up to 30 acre-feet will be used during the construction phase for site grading activities, compaction, dust control, and other minor uses. Following construction, temporary irrigation will be required to support establishment of the proposed drought-tolerant perimeter landscaping. Approximately 664,000 gallons (2.0 acre-feet) of water will be required during ~~the first year following installation. Required~~Year 1 of operations for temporary landscaping irrigation ~~volumes are expected to be scaled back~~, with that amount being reduced by ~~20 to~~approximately 30 percent ~~each~~per year ~~to allow for complete shutoff~~, with cessation of irrigation ~~by year 3 through~~expected after Year 5. The onsite water tank will only require refilling in the event stored water is used for emergency response activities, which is not anticipated, or due to tank maintenance and will occur infrequently at most.

Construction and temporary landscape irrigation water will be obtained from one of the following sources:

1. **Solano Irrigation District** – SID, the local water purveyor for the Project site and surrounding area, may provide required water either via their irrigation canal abutting the Project site or via their pressurized system depending on time of year, availability, and feasibility of pumping directly from the canal. Additional information for each approach is provided in the following sections. SID provides construction water "for on-site dust control and soil consolidation during construction and/or grading activities on lands within the District's boundary" (SID 2024). The Applicant submitted a request for construction water through the SID's defined process. Based on the response received (see Appendix 2-C), SID is not able to process requests for future years and does not provide will-serve letters. Water budgets are approved on an annual basis and all construction water contracts terminate at the end of each calendar year.
2. **On-site groundwater well –** In the event SID is unable to meet Project water supply needs, the Applicant will develop an onsite groundwater well to serve construction and temporary landscape irrigation needs. Additional information is presented in the sections below, Section 4.10, *Hydrology/Water Quality*, and Appendix 4.10-B.

### 2.3.3.1 Irrigation Canal

An east-west oriented unlined irrigation canal is located within an SID easement between the Project site and Kilkenny Road. The canal is approximately 3 feet deep and 10 feet wide based on site topographic survey data, aerial imagery, and site reconnaissance documentation. SID distributes water to irrigation users during the irrigation season, which varies annually but is typically April through October.

If canal water is available and approved for construction use by SID at the time of construction, the construction contractor will withdraw water from the canal using a temporary pumping, conveyance, and storage system. The system will include an intake screen, flexible pump intake hose, pump, shutoff valve, flexible conveyance hose, and a temporary storage tank located approximately 100 feet

south of the canal within the construction laydown area. Alternatively, the water may be pumped directly into water trucks in lieu of using a temporary storage tank. The system will be manually operated as needed to fill the temporary water tank or water trucks throughout the construction phase. A conceptual layout showing the system components and approximate location is provided in **Error! Reference source not found.**. A similar system could be used to fill water trucks for landscape irrigation during the first 5 years of operation, if necessary.

A 5-horsepower, 245 gallon per minute (gpm), gasoline-powered centrifugal pump has been conservatively assumed for the purposes of the updated environmental analysis (pump specifications are provided in Appendix 2-D). The pump will be placed within secondary containment at least 50 feet from the canal.

#### 2.3.3.2 Offsite SID Pressurized System

If SID water is available and approved for construction use by SID, but the adjacent irrigation canal is not a suitable source due to seasonal or other constraints, the Applicant's construction contractor may fill water trucks at other locations within SID's distribution system.

The SID irrigation system is defined by the Putah South Canal (PSC). SID diverts water from Lake Solano at the Putah Diversion Dam into the PSC. The PSC is the main canal that serves SID's irrigated area, from which diverge an association of sub-canals, laterals, and pipelines. Approximately half of SID irrigated lands are served primarily by pressurized systems. This includes 169 miles of pipelines or 46 percent of the total lines within the SID distribution system. SID currently has a few agricultural pipelines that have large capacities with low-volume users. These areas are typically operated as on-demand systems. Additionally, SID also provides water for nine small potable water systems and six non-potable water systems. The nearest SID pressurized pipeline to the Project area is approximately 1 mile away as is the nearest SID-owned groundwater well (SID 2018).

The following assumptions were made regarding offsite SID water use:

- Water will be sourced within 7 miles of the Project site.
- Up to eight water trucks will be filled daily (5 days per week) during the 9 months spanning the site grading, BESS, Project Substation, and gen-tie construction activities.

#### 2.3.3.3 Groundwater Well

As described in Appendix 4.10-B, the Applicant will develop an onsite groundwater well to serve Project water supply needs in the event SID is unable to meet Project water needs based on seasonal availability, water use limitations, or other restrictions.

**Figure 2-3. Irrigation Canal Temporary Water Supply Conceptual Layout**

The proposed groundwater well, if required, will be installed on the southwest side of the BESS array adjacent to a facility road, as depicted on **Error! Reference source not found.**. The location was selected based on the following siting factors:

- Solano County water supply well setback requirements (see Table 2-1),
- Distance from water supply wells on adjacent properties,
- Water truck access, and
- Avoidance of an on-site Pacific Gas and Electric (PG&E) gas transmission line easement.

The Solano County Department of Resource Management requires the well to be located certain distances from the features listed in Table 2-1 below to protect groundwater from potential contamination sources.

**Table 2-1. Solano County Department of Resource Management Setback Requirements for Non-Public Supply Water Wells**

| Feature | Minimum Distance Guideline (feet) |
|---|---|
| Property line, stream, ditch, drainage course | 25 |
| Sewer line | 50 |
| Septic tank, disposal field, deep trench, animal enclosure, hazardous materials tanks | 100 |

The selected location is located at least 1,000 feet from the nearest supply well on adjacent properties to minimize potential drawdown impacts (refer to Appendix 4.10-B, *Groundwater Supply Feasibility Study* for further information regarding drawdown). This location also maintains the required property line setback, avoids the PG&E gas transmission line easement, and will allow water truck access during construction.

The expected groundwater well production was assessed in Appendix 4.10-B, *Groundwater Supply Feasibility Study*. As discussed therein, a suitable well pump for a site water well with 60 gpm capacity will be a 4-inch-diameter, 5-horsepower electrical submersible pump. During construction, groundwater will either be pumped directly into water trucks or may be stored in a temporary tank placed within the onsite construction laydown area southwest of the BESS array. During operations, water will be pumped directly into a water truck to be dispensed by the temporary irrigation system.

For well construction, an area of approximately 100 feet by 100 feet will be necessary for drilling rig and equipment setup. Development of an onsite well will involve well drilling, casing installation, and well development and testing activities described below.

Well development will consist of drilling and installing an initial conductor casing. A pilot borehole will then be drilled and tested at a depth of approximately 300 to 500 feet below ground surface. The final depth of the borehole will depend on aquifer characteristics. An appropriate filter pack and well screen will then be prepared based on analysis of formation samples from geophysical surveys completed within the cleaned, pilot borehole. After a final well design has been prepared and relevant surveys completed, the well casing will be installed within the now enlarged borehole, at which point a filter pack, transition layer, and respective cement and bentonite seals will be installed.

The initial well development will consist of utilizing air lifting methods to remove heavy drilling fluids, including sand or drilling mud. Any turbid discharge will be contained in temporary storage tanks for offsite disposal. Clear water will be contained in onsite percolation ponds. After removing any remaining sediment from the well, the drill rig and associated equipment will be demobilized, and a pump rig and associated equipment will be mobilized.

Final well development will include installing a test pump to determine sediment content and clarity of the produced water. When the well is adequately developed, aquifer tests will be conducted, the test pump will be removed, any sediments will be removed, and a downhole video survey will be performed. Finally, site cleanup and restoration will occur. A temporary well cover will be installed as will a permanent well pump and equipment.

#### 2.3.3.4 Onsite Water Tank

The Applicant is proposing to install an approximately 24,000-gallon onsite water tank to be used as a backup water supply resource for Dixon Fire Protection District (DFPD) for local fire suppression needs. While fire suppression is not recommended for direct use on the BESS equipment, the water source could be used by first responders to fight wildfires or for fire events on other nearby properties at their discretion. This Project element is being proposed as a benefit to the local community to help address fire suppression needs whether or not related to the Corby BESS facility.

The proposed water tank will be located adjacent to the southern BESS site access road (see **Error! Reference source not found.**). The water tank will be accessible via the proposed southern BESS access road off Byrnes Road. The water tank will include standard fire system connections compatible with DFPD fire engine pumping apparatus, to be specified by DFPD.

The tank will be constructed using high-strength galvanized steel and will be placed on a poured concrete foundation. The tank diameter will be 15 feet, with a peak roof height of 18.75 feet. Vendor design drawings and details are provided in Appendix 2-E.

The water tank will be filled by either by water supplied by SID or and onsite groundwater well. Under either scenario, water will be pumped into water trucks at the source location, then used to fill the tank upon completion of construction. Tank replenishment is not anticipated and will be performed infrequently. Tank inspections and maintenance will be performed in accordance with manufacturer specifications, with tank cleaning or repairs performed as needed.

### 2.3.4 Waste Management

During operations, the Project will not generate solid, liquid, or hazardous wastes on a regular basis. Insignificant quantities of nonhazardous solid waste will be infrequently generated by regular O&M activities and will be disposed of with standard refuse collection at a regional O&M facility.

Used lithium-ion battery cells may be considered hazardous waste in California when they are discarded, whether or not they are rechargeable. Accordingly, the battery modules included in the

BESS eventually will be recycled or disposed of in accordance with the federal and California hazardous waste requirements applicable at the end of their useful life. Many battery manufacturers offer to reclaim lithium-ion batteries, as many of the component parts can be recycled from spent batteries and used in new products. In addition, to reuse in new battery cells, the recycled materials extracted can be used in a variety of consumer products, such as lithium grease, concrete additives, and some glass products.

Any additional hazardous waste or electronic waste generated during operations will be transported to an approved waste handling facility for the specific waste stream (e.g., electronic-waste recycling). All contractors and workers will be educated about waste sorting, appropriate recycling storage areas, and how to reduce landfill waste.

### 2.3.5 Management of Hazardous Materials

The Project will use lithium-ion batteries. The batteries will be delivered to the Project site in U.S. Department of Transportation-certified vehicles and in compliance with all applicable requirements of the U.S. Department of Transportation, California Highway Patrol, and California Department of Motor Vehicles. Batteries will be housed in battery enclosures as described above.

Other hazardous materials used for operations will either be stored offsite at a regional O&M facility or stored onsite in accordance with the manufacturers' specifications and consistent with applicable regulatory requirements, including dedicated storage areas with secondary containment to prevent accidental release. Workers will be trained to engage in safe work practices and to properly identify and handle any hazardous materials onsite.

### 2.3.6 Fire Protection

Lithium-ion batteries are inherently safe and stable, and there are thousands of BESS facilities safely operating around the world. Battery storage facilities include both onsite and offsite monitoring systems, as well as fire detection systems that meet or exceed industry standards. The Project will deploy a container-based system design to limit the likelihood of any type of fire event impacting more than a small portion of the site, due to physical separation between individual battery containers. The Applicant will coordinate and train with local first responders and fire officials to prepare for a coordinated response in the unlikely scenario of a thermal event.

Each BESS unit will have a fire rating in conformance with local fire authority and Solano County standards, via compliance with the 2022 California Fire Code. The Project's fire safety system design will comply with Section 1207 Electrical Energy Storage Systems, which adopts the NFPA's Standard for the Installation of Stationary Energy Storage Systems (NFPA 855). A representative fire protection system schematic is provided in Appendix 2-~~D~~F. Per NFPA 855, the batteries used in this Project will be manufactured and tested in accordance with UL 9540A, the Standard for Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems. This test method was developed to minimize the risk of thermal runaway to address safety concerns about battery storage equipment raised by fire departments and building officials in the United States. A nationally recognized testing laboratory independently tests equipment for compliance with the latest battery energy storage safety code requirements. Compliance with these standards and certification includes a Battery Management System design that detects abnormal conditions, including but not limited to

high temperatures at the battery cell or battery module level, and automatically shuts down the battery rack. Furthermore, installation of battery units will follow manufacturer specifications for the spacing of batteries and clearance distances to further prevent a thermal runaway event and propagation. Each unit will also be equipped with TMSs for thermal management of the batteries. Power to the TMS and lighting will be provided through a connection to the onsite station service transformer with connection lines installed above and/or below ground. Enclosures housing batteries are designed with adequate deflagration control measures and will also be equipped with hydrogen detection that will alert the remote monitoring facility that the sensor has been activated. See Section 4.9.3.1 in Section 4.9, *Hazards and Hazardous Materials*, for additional detail on fire safety standard compliance and testing.

#### 2.3.6.1 Impact, Puncture, or Other Mechanical Damage

Batteries are shipped in well-designed protective containers, which include tamper-proof tilt and shock sensors that clearly indicate if that container has experienced rough handling, even if not visible to the eye. Batteries whose sensors indicate shock or damage will not be installed at the site.

#### 2.3.6.2 Overcharging

Fail-safe systems with backup power constantly monitor each battery's state of charge to prevent overcharging. In the event of a fault, power from the grid is cut automatically and the control center is alerted.

#### 2.3.6.3 Overheating

Temperatures within each module are automatically monitored. Containers feature fail-safe cooling systems with backup power that regulate interior temperatures. Should the container or any individual cell begin to overheat, the fire safety system will react as needed.

#### 2.3.6.4 Short Circuits

The BESS monitoring system automatically detects short circuits and disconnects power within microseconds.

With the above controls, a BESS facility is safe to operate and will quickly neutralize potentially unsafe battery conditions to prevent, detect, and minimize the impact of a thermal event. The BESS enclosures will be listed under UL 9540 (Standard for Energy Storage Systems and Equipment). Inverters will be listed under UL 1741 (Standard for Inverters, Converters, Controllers, and Interconnection System Equipment for Use with Distributed Energy Resources). The battery cells and modules will be listed under UL 1973 (Standard for Batteries for Use in Stationary and Motive Auxiliary Power Applications). The battery enclosures will only include batteries and associated protection and control equipment that include built-in fail safes designed specifically to prevent thermal runaway and propagation.

### 2.3.7 Facility Operation

No permanent O&M staff will be located at the Project site. The BESS will be uncrewed and operational control will be from an offsite control room through a SCADA system.

The Project will require up to six workers to support onsite and offsite O&M and administrative support functions. Onsite O&M activities will include performing routine visual inspections, executing minor repairs. and responding to needs for plant adjustment. On intermittent occasions, additional workers may be required for repairs or replacement of equipment or other specialized maintenance. However, due to the self-operating nature of the facility, such actions will likely occur infrequently.

One major maintenance inspection will also take place annually, requiring approximately 20 personnel for approximately one week. In addition, approximately every 2 to 3 years the facility will require battery augmentation to maintain Project capacity; a crew of approximately 20 additional workers will be onsite for approximately 3 months to install and connect additional batteries.

The expected maintenance will generate very limited traffic during operations for O&M activities. Parking will be available onsite within the BESS areas. Additionally, the areas surrounding the Project substation will be graveled and will have adequate space for parking several vehicles. O&M vehicles will include light duty trucks (e.g., pickup, flatbed) and other light equipment for maintenance. Large or heavy equipment will not be used during normal operation, but may be brought to the facility infrequently for equipment repair or replacement.

## 2.4 Project Construction[11]

### 2.4.1 Grading and Site Preparation[12]

Site grading will be required for the construction of the Project substation, BESS array, roads, and stormwater facilities. The total graded area for the Project site will be approximately 18.5 acres. The site grading will require approximately 24,550 cubic yards of import fill to achieve 0.5 percent surface slope for site drainage purposes. Fill material will be sourced from a permitted commercial facility within 50 miles of the Project site. A preliminary grading plan is provided in Appendix 2-B.

Limited excavation activities will be required for trenching or boring for utilities, building structure foundations, and installing footings where required for structural safety. Most excavation activities will be no greater than approximately 4 to 6 feet in depth, including substation equipment and ground grid/cable trenching. The underground gen-tie trenching will be approximately 7 to 10 feet deep. Overhead gen-tie pole foundations, up to 8 feet in diameter, may extend as deep as approximately 35 feet depending on site-specific soil conditions.[13] At locations where gen-tie poles will be installed, minor cuts may be required where the foundation will be driven.

Any agricultural crops on the site at the time of construction will be removed. In general, all vegetation will be removed from the Project site during site preparation activities to clear the site for grading, facility construction, and temporary construction uses.

Additionally, approximately 21.6 acres of existing orchards will be removed throughout the gen-tie corridor and gen-tie laydown area prior to gen-tie construction. The resulting biomass will be hauled offsite to a commercial composing facility within a 50-mile radius.

[11] Appendix B (b) (1) (C)
[12] Appendix B (g) (15) (A) (iii)
[13] Appendix B (b)(1)(C)

### 2.4.2 Construction Workforce

Project construction ~~will include~~, including site preparation, grading, battery/container installation, substation installation, gen-tie foundation and tower erection, gen-tie stringing and pulling, telecommunication line installation, onsite water tank construction, and Project commissioning~~.~~, will take place over 14 months. Groundwater well development, if required, will begin one month earlier and expand the overall duration to 15 months. These activities are expected to require an average workforce of approximately ~~78~~80 workers over ~~the 14~~a 15-month ~~construction~~ period, with a peak workforce of approximately 131 workers during ~~the seventh~~construction month seven (see Table 2-~~1~~2).

**Table 2-~~1~~2. Construction Workforce**

| Workforce Type | Month 0[1/] | Month 1 | Month 2 | Month 3 | Month 4 | Month 5 | Month 6 | Month 7 | Month 8 | Month 9 | Month 10 | Month 11 | Month 12 | Month 13 | Month 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **BESS** | | **Construction** | | | | | | | | | | | **Commissioning** | | |
| Construction Laborer | 1 | ~~4~~5 | 12 | 12 | 14 | 16 | 16 | 16 | 16 | ~~16~~26 | ~~16~~26 | ~~32~~42 | ~~24~~34 | 24 | 24 |
| Carpenters | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cement Finishers | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 4 | 0 | ~~0~~3 | ~~0~~3 | ~~0~~3 | ~~0~~3 | 0 | |
| Electricians | 0 | 0 | 12 | 12 | 12 | 12 | 12 | 20 | 20 | ~~20~~21 | ~~20~~21 | ~~32~~33 | ~~32~~33 | 32 | 24 |
| Equipment Operators | 2 | ~~0~~2 | 8 | 8 | 10 | 12 | 12 | 16 | 16 | ~~8~~11 | ~~8~~11 | ~~8~~11 | ~~0~~3 | 0 | 0 |
| Pile Drivers | 0 | 0 | 1 | 1 | 2 | 4 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rodmen/Ironworkers | 0 | 0 | 8 | 8 | 8 | 8 | 8 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Plumbers/Pipefitters | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 | 4 | 0 | 0 |
| Welders | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 0 | 0 |
| Truck Drivers | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 3 | 3 | 3 | 1 | 1 | 0 | 0 | 0 |
| Project Managers/Support | 1 | ~~4~~5 | 8 | 11 | 12 | 16 | 20 | 24 | 20 | ~~16~~19 | ~~15~~18 | ~~24~~27 | ~~24~~27 | 24 | 16 |
| **Gen-~~tie~~[1]tie[2/]** | | | | | | | | | | | | | | | |
| Construction Laborer | | | | | | | | 12 | 12 | 12 | 12 | | | | |
| Carpenters | | | | | | | | 2 | 2 | 2 | 2 | | | | |
| Cement Finishers | | | | | | | | 2 | 2 | 2 | 2 | | | | |
| Electricians | | | | | | | | 10 | 10 | 10 | 10 | | | | |
| Equipment Operators | | | | | | | | 5 | 5 | 5 | 5 | | | | |
| Pile Drivers | | | | | | | | 0 | 0 | 0 | 0 | | | | |
| Rodmen/Ironworkers | | | | | | | | 2 | 2 | 2 | 2 | | | | |
| Truck Drivers | | | | | | | | 2 | 2 | 2 | 2 | | | | |
| Project Managers/Support | | | | | | | | 5 | 5 | 5 | 5 | | | | |
| **Total** | 4 | ~~8~~12 | 49 | 52 | 61 | 71 | 78 | 131 | 115 | ~~103~~129 | ~~100~~126 | ~~97~~123 | ~~80~~106 | 80 | 64 |

~~1~~1/ Groundwater well development, if required, will begin one month prior to construction contractor mobilization.
2/ Gen-tie workforce estimate Includes underground and overhead components including PG&E gen-tie and New Corby Bay equipment installation activities.

### 2.4.3 Construction Equipment

Construction equipment will include scrapers, graders, water trucks, dozers, and compaction equipment (see Table 2-~~2~~3). The enclosure modules will be offloaded and installed using cranes, boom trucks, forklifts, rubber-tired loaders, rubber-tired backhoes, and other small- to medium-sized construction equipment, as needed. Construction equipment will be delivered to the site on low-bed trucks unless the equipment can be driven to the site (e.g., using boom trucks).

**Table 2-~~2~~3. Typical Construction Stages and Assumed Equipment**

| Construction Stage | Equipment |
|---|---|
| Groundwater Well Drilling/Testing | Drill Rig (1), Generator sets (1), Air Compressors (1), Forklifts (1), Loader (1) |
| Groundwater Well Equipment Installation | Generator sets (1), Air Compressors (1), Forklifts (1), Loader (1) |
| Site Prep (Access Roads, Laydown Area) | Rubber Tired Loaders (1), Skid Steer Loaders (1), Tractors/Loaders/Backhoes (1) |
| Grading | Graders (1), Plate Compactors (1), Rollers (1), Rubber Tired Loaders (1), Skid Steer Loaders (1), Tractors/Loaders/Backhoes (1), Water Truck (1) |
| BESS Mechanical/Electrical Installation | Cranes (2), Air Compressors (2), Excavators (2), Plate Compactors (2), Generator Sets (2), Rollers (1), Rough Terrain Forklifts (1), Skid Steer Loaders (2), Tractors/Loaders/Backhoes (2) |
| Gen-tie Site Prep | Dozers (1), Excavators (1), Stump Grinder (1) |
| Substation Installation | Air Compressors (1), Aerial Lifts (4), Bore/Drill Rigs (1), Cranes (1), Excavators (1), Generator Sets (1), Rollers (1), Rough Terrain Forklifts (1), Rubber Tired Dozers (1), Tractors/Loaders/Backhoes (1), Trenchers (2) , Skid Steer Loaders (1) |
| Gen-tie Foundation, Tower Erection, and Underground Installation | Air Compressors (2), Cranes (1), Forklifts (1), Pumps (2), Welders (2), Bore/Drill Rigs (1), Excavators (1), Water Trucks (1) |
| Gen-tie Stringing and Pulling | Aerial Lifts (2), Tractors/Loaders/Backhoes (2) |
| Onsite Water Tank Installation | Excavators (2), Backhoes (2), Bulldozers (1), Cranes (2), Welders (2), Generator Sets (2), Compactors (2), Transport Trucks (2) |
| Commissioning | Backhoe (1), Forklift (2), Generator, Loader (1) |
| Generator-only Power Phase | Generator Sets (2), Water pump (1)[1/] |

1/ The Generator-only Power Phase spans the entire 14-month construction period; therefore, the SID canal water extraction pump was added to this phase.

### 2.4.4 Construction Schedule and Activities

Construction of the Project is anticipated to be completed in approximately 14 months, including site preparation, grading, BESS and substation installation, gen-tie construction, and Project commissioning. It is anticipated that the work will be completed between 7 a.m. and 5 p.m. Monday-Friday and Saturday (when required) between 8 a.m. and 5 p.m. Project construction will typically include a total of five shifts per week (Monday through Friday). Overtime and weekend work will be used only as necessary to meet scheduled milestones or accelerate schedule and will comply with applicable California labor laws and applicable Solano County Code construction noise requirements (see Section 4.7, *Geology, Soils, and Paleontological Resources*). Groundwater well development, if required, will begin 1 month ahead of construction contractor mobilization, expanding the overall duration of onsite activities to 15 months through Project commissioning.

Typical construction steps are as follows and are described further below, and Table 2-~~3~~4 lists typical construction stages and durations:

- Site survey activities, including demarcation of construction areas and any sensitive resources needing protection;

- Erosion and sediment control measure installation;
- Groundwater well development;
- Site preparation, including vegetation removal, access road and temporary construction staging area development;
- Site grading;
- Fencing installation;
- BESS civil, mechanical, and electrical construction;
- Gen-tie site preparation, including orchard removal;
- Substation installation;
- Gen-tie foundation and tower erection;
- Underground gen-tie construction;
- Gen-tie stringing and pulling;
- Telecommunications line installation;
- Onsite water tank installation;
- BESS commissioning; and
- Final site cleanup and restoration.

**Table 2-~~3~~4. Typical Construction Stages and Duration**

| Task | Duration[1/] |
|---|---|
| Groundwater Well Development | 2 months |
| Site Preparation | 2 months |
| Grading | 3 months |
| BESS Civil/Mechanical/Electrical Installation | 7 months |
| Gen-tie Site Preparation | 2 weeks |
| Substation Installation | 6 months |
| Gen-tie Foundation and Tower Erection and Underground Installation | 6 months |
| Generation Tie Stringing and Pulling | 3 months |
| Telecommunications Line Installation | 2 months |
| Onsite Water Tank Installation | 4 months |
| Commissioning | 3 months |

1/ Tasks will overlap; therefore, durations are not cumulative.

### 2.4.4.1 Demarcation of Sensitive Resources

Any sensitive areas identified through the environmental approval and permitting processes to be avoided in and adjacent to the Project site will be staked and flagged with orange construction fencing, at a minimum, to keep workers from entering these areas.

### 2.4.4.2 Temporary Construction Laydown Areas

Temporary construction laydown areas will be used for construction trailers, employee parking, laydown, staging, and storage of construction materials, and will be located within the Project site.

Construction laydown areas will be located within open areas on the northern and southern portions of the Project parcel and an additional gen-tie laydown area will be located west of the overhead portion of the gen-tie line, within an Applicant-owned parcel (APN 0133-060-020). The construction and gen-tie laydown areas are depicted on Figure 1-3.

#### 2.4.4.3 Road Infrastructure

Vegetation and minor grading will be required prior to the placement of gravel to create the main access points to the Project site from Byrnes Road, and for access roads within the Project site. New onsite access and maintenance roads will be graded to allow water to sheet flow across the site. Access roads on the Project site will be maintained during construction and operations.

#### 2.4.4.4 Erosion and Sediment Control

Erosion control best management practice measures will be implemented to minimize erosion and collect sediment and typically include straw wattles, silt fences, straw bales, check dams, maintenance of erosion control measures, concrete waste management, watering for dust control, diverting runoff from disturbed areas, and reseeding and restoration of the site.

#### 2.4.4.5 Project Substation Installation

Typical construction steps include:

- Establish the work zone;
- Prepare the substation site;
- Excavate and lay the equipment foundations;
- Install the grounding grid;
- Build the control enclosure;
- Backfill the foundations and substation yard;
- Assemble the steel structures;
- Install the electrical equipment; and
- Conduct final inspections.

#### 2.4.4.6 BESS Installation

The BESS containers will be placed on driven piles or concrete foundations, pending final design.

#### 2.4.4.7 Power Conversion System Installation

A substation pad for the step-up transformer will be poured, followed by the installation of the medium-voltage stations, wiring of the modules through combiner boxes, and construction of the Project substation and grid interconnection. The medium-voltage stations will sit on driven piles or concrete foundations, pending final design.

#### 2.4.4.8 Inspection and Startup Testing

Prior to startup testing, the BESS array will be inspected and checked for mechanical, electrical, and control functions in accordance with the manufacturer's specifications. A series of startup procedures and tests will then be performed to ensure all equipment is operating within tolerances and that the

equipment has been installed correctly in accordance with design specifications. Subsequently, the completed phase will be connected to the PG&E Vaca-Dixon Substation and brought online.

#### 2.4.4.9 Final Cleanup and Restoration

Removal of trash and debris from the construction sites will be performed at the completion of each workday throughout construction. During construction, vegetation within active construction areas and the laydown area will be managed. Following the completion of Project construction, temporary construction laydown areas will be reseeded to stabilize site soils for erosion control.

### 2.4.5 Construction Water and Wastewater Needs

As discussed in Section 2.3.3, construction water will either be obtained from SID (from an adjacent irrigation canal or trucked in) or from a new onsite groundwater well. Project construction is expected to require approximately 14 months, including testing and commissioning prior to operation. Groundwater well development, if required, will begin 1 month ahead of construction contractor mobilization, expanding the overall duration of onsite activities to 15 months through Project commissioning. During construction, water will be required for common construction-related purposes, including dust suppression, soil compaction, and grading. Temporary onsite water tanks and water trucks will provide water for construction needs. Drinking water and temporary sanitation facilities will be delivered to the Project site. Bottled drinking water will be provided for construction workers.

The most significant water usage will occur during heavy earthwork site preparation and grading, occurring over the first few months of construction. Up to 30 acre-feet will be needed during construction, primarily during the grading phase and prior to commissioning. See Section 2.3.3 and Section 4.10, *Hydrology/Water Quality,* for additional information.

~~As discussed in Section 2.3.3, construction water will either be obtained from SID (from an adjacent irrigation canal or trucked in) or from a new onsite groundwater well.~~ ~~Development of an onsite well would involve well drilling, casing installation, and well development and testing activities. During drilling and well construction, soil cuttings, drilling mud, and groundwater will be generated. Solid wastes and muddy water would be contained in roll-off bins and transported to an appropriate landfill for disposal. Groundwater would be contained onsite within temporary berms to facilitate infiltration and would not be discharged offsite. Additional information related to groundwater well construction is provided in Appendix 4.10-B.~~

Nominal sanitary wastewater will be generated during construction. Portable restroom facilities will be provided and maintained for workers during construction and will be removed upon completion of construction.

If the onsite groundwater well is required, waste groundwater will be produced during the well development and testing activities, which will require disposal. A preliminary estimated total volume of waste groundwater is approximately 50,000 gallons (9,000 gallons from initial well development, 26,600 gallons from final well development, and 14,400 gallons from aquifer testing). Groundwater will be contained onsite within temporary berms to facilitate infiltration and will not be discharged offsite. Sufficient land area is available at the site to use a bermed area for percolation without

allowing any runoff. An earth-bermed area of 80 feet by 80 feet by 2.5 feet high will conservatively contain 50,000 gallons of groundwater with more than 0.5 foot of freeboard.

### 2.4.6 Construction Solid Waste

Most solid waste generated during construction will be nonhazardous and consist primarily of cardboard, wood pallets, copper wire, scrap metal, common trash, and wood wire spools. Construction waste materials, such as metal and wood, will be separated from the waste stream and recycled whenever feasible. Construction materials will be handled in accordance with the California Green Building Standards Code (Title 24, California Code of Regulations Part 11), which establishes standards for construction and demolition waste management and recycling or salvage of a minimum of 65 percent of nonhazardous construction and demolition waste. Non-recyclable construction waste will be placed into commercial trash dumpsters located onsite. Dumpsters will be collected as needed by a commercial service and delivered to a landfill. Construction will generate an average of approximately 80 cubic yards of nonhazardous solid waste per week over the 14-month construction period.

Approximately 650 tons of biomass will be generated during orchard removal ahead of gen-tie construction. A portion of the chipped biomass may be spread onsite; however, for the purposes of the environmental analyses herein it was assumed that 100 percent of this waste will be hauled off for disposal at a commercial composting facility no more than 50 miles from the Project site.

If the onsite groundwater well is required, soil cuttings, drilling mud, and groundwater will be generated during drilling and well construction. Approximately 18 tons of drilled soil wastes and approximately 8,400 gallons of sediment-laden water are estimated to be generated, contained in roll-off bins prior to offsite disposal. The wastes will be transported by truck and disposed of at Hay Road Landfill located approximately 10 miles southeast of the Project site. Each truckload will be limited to approximately 10 cubic yards to prevent spilling while loading the roll-off bin on to the truck. A total of 10 truckloads to the landfill are anticipated.

### 2.4.7 Construction Hazardous Materials

Construction of the Project will involve the use of hazardous materials, such as fuel, lubricants, other oils, and greases, to fuel and service construction equipment. These hazardous materials required for construction activities will be stored at the temporary construction staging areas. Hazardous waste and electrical waste will be generated in limited quantities and will be transported to appropriate regulated waste handling facilities for disposal or recycling.

### 2.4.8 Construction Traffic

Delivery of material and supplies will reach the Project site through on-road truck delivery by way of I-80 to Weber Road and then to Byrnes Road. Most truck deliveries will be for the battery enclosures, inverters, transformers installation, substation materials, and any concrete or aggregate material that may be required for foundations. These loads will typically be limited to 50 tons, or 100,000 pounds, with a typical cargo load of approximately 25 tons, or 50,000 pounds. The heaviest delivery loads to the site will be for the step-up transformer, which may be close to 160,000 pounds. Project personnel will also use these routes each day during the construction phase. Access to the Project site will be provided via the new access points along Byrnes Road, adjacent to the eastern Project site boundary.

The Project has a construction schedule of approximately 14 months. Total trip generation will vary depending on the specific phase and construction stage as will each type of trip. The peak of construction activity is anticipated to occur during the seventh month of construction, with an estimated maximum of 678 daily trips, with 181 trips in the morning peak hour and 181 trips in the evening peak hour.

Construction of the gen-tie line will require temporary closure of Kilkenny Road west of the Project site to allow for construction. Underground Route Option #2, located within the Kilkenny Road right-of-way, would require full road closure immediately east of the Project site to allow sufficient workspace for horizontal directional drilling (HDD) staging, drill rig, and other equipment. Partial road closure would be required west of the HDD entry location to the gen-tie laydown area to accommodate the HDD exit activities on the west side of the Underground Route Option #2. Single-lane road availability would be maintained at all times for local traffic, including the residence located on the south side of Kilkenny along this route. The road closures would last approximately 8 to 10 weeks.

Additional information related to construction traffic is provided in Section 4.17, *Transportation*.

## 2.5 Engineering[14]

This section, together with the engineering appendixes and Section 3.0, *Electric Transmission*, presents information concerning the design and engineering of the Project. LORS applicable to engineering disciplines are also provided.

### 2.5.1 Facility Design[15, 16]

Summary descriptions of the design criteria for all of the major engineering disciplines are included in Appendix 2-A, *Design Basis and Major Equipment Specifications*. Appendix 2-~~E~~G contains a Preliminary Geotechnical Report for the Project based on borings taken at the Project site.

Design and engineering information and data for the following systems are found in the following subsections of this Application for Certification:

- Batteries and battery enclosures (see Section 2.3.2.1);
- Inverters (see Section 2.3.2.2);
- Project substation (see Sections 2.3.2.3 and 3.2.3); and
- Gen-tie (see Section 3.2, *Transmission Line Description, Design, and Operation*).

### 2.5.2 Facility Reliability[17]

The Project will utilize lithium-ion battery technology, renowned for its exceptional safety, ease of understanding, and high efficiency. Considered one of the most reliable energy storage methods

[14] Appendix B (i) (1) (A)
[15] Appendix B (h) (1) (A) through (D) (ii) and Appendix B (h) (3) (ii)
[16] Appendix B (h) (1) (D) (viii) and (ix)
[17] Appendix B (h) (3) (B), Appendix B (h) (3) (B) (i), and Appendix B (h) (3) (B) (ii)

available, lithium-ion technology boasts an extended lifespan and exhibits superior safety and stability characteristics.

In addition to the implementation of superior lithium-ion battery technology, unlike other power generation assets, batteries have no moving parts, significantly reducing the likelihood of outright failure and the need for routine maintenance-related planned outages. Moreover, the battery containers are designed to be modular, ensuring that if one unit fails within a container, the remaining units will continue to operate until the defective unit is replaced. This feature enables battery storage projects to maintain a high level of availability throughout the year.

While the probability of battery failure is low, it is important to acknowledge that capacity to charge and discharge diminishes over time. To address this, the Project incorporates augmentation space, allowing for an increase in the number of batteries and inverters.

### 2.5.3 Efficiency

The battery storage facility employs an efficient design approach, whereby multiple battery containers feed into a single inverter. By spacing the batteries closely together without sacrificing accessibility and incorporating other necessary site features, the facility minimizes its physical footprint. Unlike solar or wind projects of comparable size, which require significantly larger acreage, the 300 MW facility occupies a modest 16-acre area within a privately owned parcel. The round-trip efficiency of the battery storage Project is estimated to be approximately 84.6 percent, with significantly fewer losses as compared to other energy producing technologies. This estimate accounts for transmission and battery cycle losses as well as plant auxiliary loads.

Furthermore, the Project's strategic location in proximity to the Vaca-Dixon Substation minimizes the distance energy needs to travel for charging and discharging into the grid. This arrangement maximizes the round-trip efficiency of the Project, ensuring optimal utilization of the stored energy.

## 2.6 Facility Closure[18]

The proposed Project, including the BESS, inverters, Project substation, gen-tie lines, and ancillary facilities, will be decommissioned when the Project's life is over (anticipated to be approximately 30 years). During decommissioning, most materials are anticipated to be recycled to the greatest extent practicable. For example, the degraded lithium-ion batteries may be recycled or repurposed; the steel or aluminum battery enclosures, with concrete foundations, can also be recycled; and metal scrap equipment and parts that do not have free-flowing oil will be sent for salvage. Any materials that cannot be recycled will be disposed of according to federal, state, and local regulations in place at the time of decommissioning.

Oils, hydraulic fluids, and fuels will be transferred directly to a tanker truck from the respective tanks and vessels. It is anticipated that all oils and batteries will be recycled at an appropriate facility. Storage vessels will be rinsed and transferred to tanker trucks. Other items that are not feasible to remove at the point of generation, such as lubricants, paints, and solvents, will be kept in a locked utility structure with integral secondary containment that meets applicable requirements for hazardous waste storage until they are removed for proper disposal or recycling.

[18] Appendix B (e) (1)

Site personnel involved in handling the materials described above will be trained on how to handle them properly. Enclosures used to store hazardous materials will be inspected regularly for any signs of failure or leakage. Transportation of the removed hazardous materials will comply with applicable regulations for transporting hazardous materials, including those set by the U.S. Department of Transportation, U.S. Environmental Protection Agency, California Department of Toxic Substances Control, California Highway Patrol, and California State Fire Marshal.

Upon removal of the Project components, the site will be restored in accordance with an approved decommissioning plan. Since decommissioning activities will involve exposure and disturbance of soils, measures for erosion and sediment control will be implemented in accordance with a separate Stormwater Pollution Prevention Plan, which will be required for decommissioning.

## 2.7 PG&E Vaca-Dixon Substation Network Upgrades

To accommodate the interconnection of the Project and other future projects, PG&E is currently performing network upgrades that include grading, construction of concrete pads, and relocating existing structures within the Vaca-Dixon Substation. Three structures within the substation supporting the existing Vaca-Plainfield 60-kV transmission line will be relocated and designed to accommodate the equipment modifications at the substation described above and to cross under the proposed Corby 230-kV gen-tie line to allow for the appropriate separation of conductor between the lines. The structures will be replaced with single-circuit dead-end standard light duty steel poles, which will be guyed and direct-embedded, to support the 60-kV conductors. The network upgrade activities described above are all occurring in disturbed areas within the existing PG&E substation and are authorized by the California Public Utilities Commission pursuant to General Order 131(d) and therefore are not part of the Corby BESS Project and not evaluated in Section 4.0 of this application.

Specifically, for the Project and within the previously graded area within the Vaca-Dixon Substation, PG&E will be installing a new 230-kV double bus bay structure with associated foundations and supports on approximately 0.6 acre of the existing substation. This New Corby Bay will house four switch support structures and associated equipment for the new 230-kV connection. Existing fencing will be replaced to extend around the new equipment, and a new 12-foot-paved roadway will be installed along the new fence section to allow access to the existing 500-kV yard road.

## 2.8 Project Design Measures

The Project will incorporate specified features into the design of the Project, referenced herein as Project Design (PD) Measures, to reduce and minimize Project impacts to less than significant levels. The PD Measures are included here in summary form as part of the Project description. During the California Energy Commission's (CEC) review, it is anticipated that these PD Measures will be incorporated as enforceable Conditions of Certification.

**PD AES-01:** A landscape strip will be planted along Kilkenny Road and Byrnes Road. Drought-tolerant and native vegetation will be used~~, and all landscaping will comply with the California Department of Water Resources Water Efficient Landscape requirements.~~ with no permanent irrigation. The vegetation will include trees, shrubs, and herbaceous ground cover.

**PD AES-02:** An outdoor lighting control and management plan will be implemented to provide the minimum illumination needed to achieve safety and security. Illumination shall be downward-facing and shielded to focus illumination in the immediate area.

New outdoor light and glare emitted from the project site and construction laydown area shall not result in light being a pollutant offsite and skyward, "light pollution." The project owner shall include use of luminaires that:

a. Are only on when needed.

b. Only light the area that needs it.

c. Illuminate no brighter than necessary.

d. Minimize blue light emissions.

e. Are fully shielded (BUG Rating U0).

f. Are DarkSky International "DarkSky Approved" program products where feasible.

The project owner shall submit to the Compliance Project Manager (CPM) for approval and simultaneously to the Director of Planning and Development Services for the County of Solano for review and comment a final outdoor lighting control and management plan prepared for the Project that satisfy the above requirements and include the following:

1. Supply one set of product brochures and/or printouts (e.g., diagram, drawing) showing and describing the types of outdoor luminaires to be applied/installed to buildings, equipment, structures, and other locations on the project site (lighting schedule).

2. A diagram(s) or drawing(s) of the project site showing the approximate location of the installation/placement of the luminaire and its direction and angle (luminaire location).

**PD AES-03:** The project owner shall use exterior surface coatings, colors, finishes, materials, and a gloss level that diffuse illumination or collection, reflectance and scattering offsite and skyward from the exterior surfaces of the project buildings, structures, and equipment, and specifically include:

a. An exterior surface coating, color, finish, material, and gloss level that minimize contrast and do not introduce specular reflection in the existing physical landscape.

b. An exterior surface coating, color, finish, material, and gloss level that is in conformance with applicable adopted architectural design and site development related policies and ordinances of the County of Solano.

The project owner shall submit to the CPM for approval an exterior surface coatings, colors, finishes, and materials plan for the Project buildings, structures, and equipment that satisfy the above requirements and include the following:

1. A list of the large/major buildings, equipment, structures; perimeter wall and/or fence; transmission line towers and/or poles; above ground pipelines serving the facility onsite and offsite in public view, and a list of their proposed exterior surface coatings, colors, finishes, and materials identified by vendor, name and number, and according to the RAL color matching system or similar universal designation system;

2. One set of brochures showing coating/color chips, and/or samples of the coatings/colors or finish, materials to be applied/installed to buildings, equipment, and structures;

3. A time schedule for the completion of the application/installation of the coating, color, finish, and materials; and

4. A maintenance plan that includes procedures for the upkeep of the coatings, colors, finishes, and materials for the life of the Project.

The Project owner shall not purchase product or service from a vendor for the Project exterior surface coatings, colors, finishes, and materials prior to CPM approval of the exterior surface coating, color, finish, and materials plan.

**PD AG-1:** Prior to the issuance of building permits, the Project Applicant would secure at least 60.5 acres of agricultural mitigation land in order to meet the mitigation criteria outlined in the Solano County General Plan policies. The basic parameters of the required mitigation outlined in the County policies are as followed:

- Mitigation at a ratio of 1.5:1 (1.5 acres of farmland protected through mitigation for each acre of farmland converted).
- Mitigation within the same agricultural region [19] as the proposed development project.
- Mitigation lands of similar agricultural quality to the lands being converted.

Additionally, the Applicant will enter to into an Initial Screening Agreement with Solano Land Trust and will advance through Solano Land Trust's process ending in Acceptance and Execution of a mitigation agreement. Alternatively, if Solano County implements an agricultural mitigation program in the near future, or if other mitigation providers become available, the Applicant may elect to participate in those programs, if approved by CEC.

**PD BIO 1: Best Management Practices, On-site Monitoring, and Worker Awareness Training**

**PD BIO-1a:** The Applicant will submit the resumes, including contact information, of the proposed Designated Biologist and any Biological Monitors to the ~~Compliance Project Manager (CPM).~~CPM. The resumes will include applicable degrees and experience for approval by the CPM. The approved Designated Biologist and Biological Monitors will be responsible for overseeing biological resources compliance with the protective measures during any site or related facilities mobilization, ground disturbance, construction, and closure activities. The Designated Biologist and Biological Monitors will have the authority to halt activities in violation of the biological resources protective measures or in areas which may affect a sensitive resource or species. If the Designated Biologist and Biological Monitor halts construction activities, the CPM will be notified, and work will proceed only after corrective measures have been taken. The Designated Biologist and Biological Monitors will have a copy of the Project permit(s) with them during all construction activities and will notify the Applicant and the CPM of any noncompliance with biological resources.

**PD BIO-1b**: Qualified biologists will conduct preconstruction clearance surveys for all special status wildlife species prior to initial ground-disturbing activities. The biologists will be current with the

[19] The Project is located within the Elmira/Maine Prairie agricultural region in the Solano County General Plan. https://www.solanocounty.com/civicax/filebank/blobdload.aspx?BlobID=6493

latest information on protocols and guidelines and have thorough and current knowledge of relevant species' behavior, natural history, ecology, and physiology.

**PD BIO-1c**: Based on the results of preconstruction surveys, the approved Designated Biologist or Biological Monitor may oversee the initial ground disturbance of Project construction activities with the potential to impact special status species.

**PD BIO-1d:** A Worker Environmental Awareness Program (WEAP) will be prepared, and approved by the CPM, to address the types of construction activities that may affect special status species. The WEAP will describe the protective measures stipulated in the permits. Special emphasis will be placed on explaining the protective measures developed for special status species and the consequences of noncompliance. At a minimum, the program will contain information on physical characteristics, distribution, behavior, ecology, sensitivity to human activities, legal protection, penalties for violations, reporting requirements, and protective measures associated with the listed species. The WEAP will be administered to all onsite personnel including employees, contractors, contractors' employees, supervisors, inspectors, subcontractors, and delivery personnel. The program will be administered onsite by the approved Designated Biologist or Biological Monitor. It may include an oral presentation, video/PowerPoint, and written materials.

**PD BIO-1e:** To discourage attraction by predators of protected species, all food-related trash items, such as wrappers, cans, bottles, and food scraps, will be disposed of in solid, closed containers (trash cans) daily. Onsite trash receptacles will be emptied as necessary (for example, weekly) to prevent overflow of trash. Trash removed from the receptacles will be hauled to an offsite waste disposal facility.

**PD BIO-1f:** Project-related vehicles during construction will observe a 15-mile-per-hour speed limit while onsite, except on county roads and state highways.

**PD BIO-1g:** To prevent inadvertent entrapment of special status species, or other animals during construction, at the end of each workday all excavated, steep-walled holes or trenches more than 2 feet deep will be equipped with one or more escape ramps constructed of earth fill or wooden planks or potentially covered with plywood or similar materials if feasible . Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals by the onsite Biological Monitor or construction personnel trained by the monitor. If a trapped special status wildlife species is discovered, the appropriate agency, U.S, Fish and Wildlife Service (USFWS) and/or California Department of Fish and Wildlife (CDFW) will be contacted.

**PD BIO-1h:** To control erosion, sedimentation, and/or the release of storm waters laden with sediment, fuels, lubricant, and other deleterious material from out of the approved work areas during and after Project implementation, the Applicant will implement appropriate best management practices which typically include straw wattles, silt fences, straw bales and diverting runoff from disturbed areas. All fueling and maintenance of vehicles and other equipment and staging areas will occur at least 200 feet from any water body. Spill response materials will be kept onsite at all times. Before work begins, the Applicant will provide prompt and effective response to any accidental spills. During the WEAP, all workers will be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

**PD BIO-1i:** Access by Project-related personnel to the Project site will be restricted to established and/or approved access roads. Cross-country vehicle and equipment use outside designated work areas will be prohibited.

**PD BIO-1j:** Other than law enforcement or security personnel, Project personnel will be prohibited from bringing pets and firearms to the Project site.

**PD BIO-1k:** All unused material and equipment, including soil and rock piles, will be removed upon completion of construction.

**PD BIO 2: Migratory Birds**

**PD BIO-2a:** If Project ground-disturbing or vegetation clearing and grubbing activities commence during the avian breeding season (February 1 through August 31), a qualified biologist shall conduct a pre-construction nesting bird survey no more than 14 days prior to initiation of Project activities. The survey area shall include suitable raptor nesting habitat within 300 feet of the Project boundary (inaccessible areas outside of the Project site can be surveyed from the site or from public roads using binoculars or spotting scopes). Pre-construction surveys are not required in areas where Project activities have been continuous since prior to February 1, as determined by a qualified biologist. Areas that have been inactive for more than 14 days during the avian breeding season must be re-surveyed prior to resumption of Project activities. If no active nests are identified, no further mitigation is required. If active nests are identified, the following measure is required:

- A suitable buffer (for example, 660 feet for eagles, 300 feet for common raptors; 100 feet for passerines) shall be established by a qualified biologist around active nests and no construction activities within the buffer shall be allowed until a qualified biologist has determined that the nest is no longer active (that is, the nestlings have fledged and are no longer reliant on the nest, or the nest has failed). Encroachment into the buffer may occur at the discretion of a qualified biologist. Any encroachment into the buffer shall be monitored by a qualified biologist to determine whether nesting birds are being impacted.

**PD BIO-2b**: All pipes, hoses, culverts, or similar structures larger than 4 inches in diameter shall be closed, covered or capped to prevent burrowing owl entry upon arrival to the Project site. All similar structures greater than 4 inches in diameter may be capped or shall be inspected thoroughly for wildlife before the structure is buried, capped, used or moved at the Project site.

**PD BIO-2c:** Project facility lighting shall be designed to provide the minimum illumination needed to achieve safety and security objectives. All lighting shall be directed downward and shielded to focus illumination on the desired areas only and avoid light trespass into adjacent areas. Lenses and bulbs shall not extend below the shields.

**PD BIO-2d:** Rodenticides shall not be used at the Project site. If rodent control is required to minimize impacts on adjacent agricultural operations, non-chemical methods will be employed.

**PD BIO-3: Reduce Bird Electrocutions and Collisions with Power Lines**

The Applicant will ensure that new transmission lines and associated equipment will be properly fitted with wildlife protective devices to isolate and insulate structures to prevent injury or mortality of birds, to the extent feasible. Protective measures shall consider the guidelines provided in

*Suggested Practices for Avian Protection on Power Lines, The State of the Art in 2006* (APLIC 2006) and *Reducing Avian Collisions with Power Lines: The State of the Art in 2012* (APLIC 2012), or the current Avian Power Line Interaction Committee guidelines in place at the time the transmission lines are installed, and will include insulating hardware or conductors against simultaneous contact, using poles that minimize impacts on birds, and increasing the visibility of conductors or wires to prevent or minimize bird collisions.

**PD BIO-4: Crotch's Bumble Bee Preconstruction Survey**

Preconstruction surveys for Crotch's bumble bee shall be performed in all suitable habitat within the Project disturbance area and a 50-foot buffer around it by a qualified biologist within 2 weeks prior to the start of construction. Surveys will include a minimum of two survey efforts which shall not occur on sequential days. The surveys will be conducted in weather conditions suitable for surveys as outlined in CDFW's *Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species* (CDFW 2023). The purpose of the preconstruction survey will be to identify individuals, active nest colonies, and associated floral resources outside of permanent and temporary impact areas that could be avoided by construction personnel.

If an individual Crotch's bumble bee is detected within 50 feet of Project activity, a qualified biologist or biological monitor will be onsite during any ground disturbance (e.g., earthmoving, excavation, trenching) and/or vegetation removal activities that occur when Crotch's bumble bee are present within the activity footprint. A 25-foot no-disturbance buffer will be implemented around Crotch's bumble bee individuals within the area and monitored until it leaves the area on its own.

If an active nest colony is found, a 50-foot no-work buffer will be implemented to protect the active nest and floral resources. Construction activities will not occur within the no-work buffer until the colony is no longer active (that is, no bees are seen flying in or out of the nest for three consecutive days, indicating the colony has completed its nesting season and the next season's queens have dispersed from the colony). If a 50-foot buffer around the nest cannot be maintained, the Applicant will consult with CDFW about alternative protective measures that are sufficient to minimize the risk to the active colony nest.

**PD BIO-5: Burrowing Owl**

The following measures will be implemented to avoid and minimize impacts of the Project on burrowing owl:

**PD BIO-5a: Burrowing Owl Preconstruction Surveys**

The Applicant will retain qualified wildlife biologists (experienced with burrowing owl surveys including burrowing owl identification and behaviors) to conduct focused surveys preconstruction surveys for burrowing owl within all suitable habitat areas the Project disturbance area, including the Project site, generation tie (gen-tie) corridor, and gen-tie laydown area, and 500 feet (approximately 150 meters) around the Project disturbance area, where accessible, no more than 14 days prior to initiation of ground disturbing activities (i.e., vegetation removal, grading, excavation, etc.). A minimum of two surveys will be conducted, with the first survey no more than 14 days prior to initial construction activities and the second survey conducted no more than 2 days prior to initial construction activities. The survey will begin 1 hour before sunrise and continue until 2 hours after

sunrise (3 hours total) or begin 2 hours before sunset and continue until 1 hour after sunset. The preconstruction surveys will be consistent with the guidelines provided in the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). If the work activities halt for a period of 14 days or more, the survey would need to be conducted again prior to the continuation of site activities. The burrowing owl survey may be conducted in conjunction with other required preconstruction survey, if timing is appropriate.

If no burrowing owl or their sign (i.e., pellets, prey remains, whitewash, etc.) is observed during the preconstruction surveys, construction may continue as planned and no further action is required.

If the qualified biologists detect burrowing owl or their sign during the preconstruction surveys, then an appropriately sized avoidance buffer will be implemented dependent on the time of year and level of disturbance at the Project site as defined in PD BIO-5b.

Once preconstruction surveys have been completed, a preconstruction survey report will be submitted to the CEC and CDFW within 14 days. The preconstruction survey report will outline the survey methodology including the area relative to the Project disturbance area and a description of the findings including, but not limited to, number of owls or nesting pairs, locations, number of burrows being used, signs, and description of their behavior.

**PD BIO-5b: Burrowing Owl Burrow Avoidance Buffers**

If a burrowing owl is observed within the Project disturbance area or survey buffer during preconstruction surveys, or if burrowing owls arrive on site after construction activities commence, these active occupied burrows shall be designated as an environmentally sensitive area, protected, and have appropriately sized avoidance buffers established around them by the qualified biologist during Project construction activities. An active occupied burrow is defined as those burrows that are either currently occupied by burrowing owl or burrows where burrowing owl were seen during the pre-construction surveys. No work would occur within the designated environmentally sensitive area around active occupied burrows.

The Project shall implement activity avoidance buffers (Table 2-5) in the vicinity of active occupied burrows during construction and any ground-disturbing operations activities as shown in **Error! Reference source not found.**. Please refer to Table  for typical Project activities and their disturbance levels.

**Table 2-5. Activity Buffer Distance for Active Occupied Burrows**

| Time of Year | Buffer Distance (meter) and Level of Disturbance | | | |
|---|---|---|---|---|
| | Minimal | Low | Moderate | High |
| **Standard Buffer** | | | | |
| Feb 1 – April 15 | 0 | 100 | 200 | 300 |
| Apr 16 – Aug 31 | 0 | 75 | 100 | 250 |
| Aug 31 – Jan 31 | 0 | 35 | 50 | 100 |
| **Minimum Temporary Buffer[1/]** | | | | |
| Feb 1 – April 15 | 0 | 30 | 90 | 150 |

| | | | | |
|---|---|---|---|---|
| Apr 16 – Aug 31 | 0 | 25 | 65 | 90 |
| Aug 31 – Jan 31 | 0 | 20 | 35 | 50 |

1/ Requires approval of the qualified biologist, and other conditions may apply, including, but not limited to, installation of visual and/or sound barriers, other minimization measures, and enforcement of increase in buffer from Minimum to Standard as soon as activity is complete.

An avoidance buffer around active occupied burrows may be reduced to the minimum temporary buffer if the qualified biologist verifies through noninvasive methods that either (1) the owls have not begun egg laying and incubation, or (2) juveniles from the occupied burrows are capable of independent survival (i.e., they are foraging independently and are not dependent on the natal burrow). If burrowing owls have independently left the active occupied burrow for at least 1 week, these burrows would be reclassified as inactive occupied burrows.

Inactive occupied burrows are those burrows which only show burrowing owl sign or were identified as being occupied during prior protocol level burrowing owl surveys but are not currently occupied by burrowing owl as determined during preconstruction surveys. Inactive occupied burrows will be avoided by implementing a 5-meter buffer around the burrow entrance, this buffer can be modified in coordination with the qualified biologist based on orientation and location of the burrow, proposed construction activities in the vicinity of it, and similar. Activities that do not disturb the ground, such as vegetation removal and vehicular traffic on existing roads, will generally have a smaller avoidance buffer implemented around inactive occupied burrows.

**PD BIO-5c: Burrows With No Sign**

Burrows within the Project disturbance area that have not had historic occupancy and/or show no burrowing owl sign during the 2024-2025 breeding and non-breeding season protocol surveys, as well as during preconstruction surveys, may be plugged or excavated prior to or during construction. Avoidance buffers will not be implemented around these burrows.

Burrowing owls or their sign have not been documented in the Project disturbance area; as such, the Applicant is not requesting incidental take authorization for burrowing owl. The Applicant is proposing PD BIO-5, which includes preconstruction surveys and avoidance of burrowing owls to ensure that take, as defined by the California Fish and Game Code, will not occur as a result of Project activities.

Should burrowing owls be documented during preconstruction surveys and avoidance, as defined by PD BIO-5, is not feasible, and it is determined the Project is likely to directly impact or substantially indirectly impact the burrowing owls such that take could occur, the Applicant will coordinate with the CEC and CDFW to obtain incidental take authorization.

**Table 2-6. Typical Project Activities and Their Disturbance Levels**

| Project Phase | Construction Activity | Intensity | Disturbance Level |
|---|---|---|---|
| Preconstruction | Site Visits | Short-duration, on foot, driving on established roads, quiet | Minimal |
| | Environmental Resource Surveys and Monitoring | Short-duration, on foot, driving on established roads, quiet | Minimal |
| | Activity Buffer Staking and Flagging | Short-duration, on foot, driving off-road after wildlife surveys, quiet | Minimal |
| | Civil Survey, Staking, and Flagging | Short-duration, on foot, driving off-road after wildlife surveys, quiet | Minimal |

| Project Phase | Construction Activity | Intensity | Disturbance Level |
|---|---|---|---|
| | Geotechnical Testing | Short-duration, on foot, driving off-road after wildlife surveys, quiet | Low |
| Site Preparation | Environmental Monitoring | Short-duration, passive observation of natural resources conducted by trained environmental field professionals on foot and in vehicles | Minimal |
| | Vegetation Mowing (4+ inches) | Mowing well above the ground surface to de-bulk grassland, cropland, or weedy vegetation, single pass, short duration in any single location | Moderate |
| | Vegetation Mowing (0-4 inches) | Mowing of vegetation very close to the ground surface, single pass, short duration in any single location, low to moderate soil disturbance, noise, and vibration | High |
| | Woody Vegetation Removal and Site Grubbing | Removal, chipping, and grubbing of soils to remove woody bulk, medium duration, targeted in locations with high woody vegetation content, extensive soil disturbance, noise, and vibration | High |
| | Site Grading | Movement of soil and recontouring of site topography, medium duration, may be targeted in localized areas, extensive soil disturbance, noise, and vibration | High |
| | Best Management Practices (BMP) Installation (Hand Tools) | Short-duration, on foot, driving on established roads, quiet | Low |
| | BMP Installation (Light Machinery) | Short-duration, using light equipment, driving on established roads and offroad | Low |
| | BMP Installation (Heavy Machinery) | Short- to moderate-duration, using heavy equipment, driving on established roads and offroad, extensive soil disturbance, noise, and vibration | High |
| | Security Fence Installation | Shallow foundation excavation, concrete pouring, and post establishment, and laying fencing fabric, short duration in any one location | Low |
| | Road Compaction | Use of graders and rollers, extensive noise, and vibration, moderate duration in any one location | High |
| | Equipment and Material Laydown | Movement and staging of equipment and materials, extensive noise and vibration, moderate duration in a few locations | Moderate |
| | Cable Trenching (Ditch Witch) | Short- to moderate-duration, using heavy equipment, driving on established roads and offroad, moderate soil disturbance, noise, and vibration | Moderate |
| Major Equipment Installation, Site Cleanup, Restoration | Cable/Fiber Trenching (Excavate Full Trench) | Use of heavy equipment, extensive disturbance, noise, and vibration, moderate duration in any one location | High |
| | Trenchless Installation of Cables/Fiber at Entrance and Exit Pits (Horizontal Directional Drill, Jack-and-Bore, and similar) | Use of heavy equipment, extensive disturbance, noise, and vibration, moderate duration at entrance and exit pits | High |

| Project Phase | Construction Activity | Intensity | Disturbance Level |
|---|---|---|---|
| | Trenchless Installation of Cables/Fiber along Underground Alignment | Below ground soil disturbance, limited noise and vibration. Vehicular travel along alignment. | Low |
| | Pile Driving | Short- to moderate-duration, using heavy equipment, extensive soil disturbance, noise, and vibration | Moderate - High |
| | Well Drilling | Short duration, using drill rig to develop groundwater supply well (if required) | Moderate |
| | BESS Delivery and Interconnection | Movement and staging of equipment and materials, extensive noise and vibration, moderate-duration in a one location | Moderate |
| | Gen-tie and Fiber Optic Cable Pole Foundation Excavation | Short- to moderate-duration, using heavy equipment, extensive soil disturbance, noise, and vibration | High |
| | Water Truck Use | Short-duration, using light equipment, driving on established roads | Low |
| | Hydroseeding | Short-duration, using light equipment, driving on established roads and offroad | Low |
| | Broadcast Seeding | Short-duration, on foot, driving on established roads, quiet | Minimal |
| O&M | Inspections | Short-duration, driving on established roads, quiet no ground disturbance | Low |
| | General Maintenance of Equipment | Short-duration, using light equipment, driving on established roads and offroad | Low |
| | Equipment Replacement | Short-duration, possibly heavy equipment, driving on established roads and offroad | Moderate - High |
| | Weed Management (Chemical Controls) | Short to moderate-duration, targeted herbicide application for noxious/invasive weeds, on foot in any one location, using light equipment, driving on established roads and offroad | Low - Moderate |
| | Ground-disturbing Activities | Use of heavy equipment, extensive disturbance, noise, and vibration, moderate-duration in any one location | Moderate - High |
| | Vegetation Mowing (4+in) | Mowing well above the ground surface to de-bulk grassland, cropland, or weedy vegetation, single pass, short duration in any single location | Moderate |
| | Vegetation Mowing (0-4in) | Mowing of vegetation very close to the ground surface, single pass, short duration in any single location, low to moderate soil disturbance, noise, and vibration | High |
| | Weed Management (Mechanical Controls) | Weed whacking very close to the ground or hoeing, hand pulling to remove noxious/invasive weed roots, short duration on foot in any one location, using light equipment, low to moderate soil disturbance, noise, and vibration, driving on established roads and offroad | Low - Moderate |

## PD BIO-6: Swainson's Hawk

The following measures will be implemented to avoid and minimize impacts of the Project on Swainson's hawk:

**PD BIO-6a:** The Applicant will, to the maximum extent feasible, limit construction and vegetation removal with 0.25 mile of known nests, to outside of the nesting season for Swainson's Hawk, between September 15 and March 1, to avoid impacting nesting individuals.

**PD BIO-6b:** If construction will occur during the breeding season for Swainson's Hawk, March 1 through September 15, the Project Proponent will retain qualified wildlife biologists (experienced with raptor identification and behaviors) to conduct focused surveys for Swainson's hawk nesting before construction begins. Survey methodology will follow the Swainson's Hawk Technical Advisory Committee's survey methodology (Swainson's Hawk Technical Advisory Committee 2000). Focused surveys for Swainson's hawk nesting will be conducted in the proposed disturbance area and in a buffer area of 0.25 mile around the disturbance area. The portions of the Swainson's hawk survey buffer area containing unsuitable nesting habitat and/or with an obstructed line of sight to the disturbance area will not be surveyed. No active Swainson's hawk nest trees will be removed during the nesting season.

If the qualified wildlife biologists find an active Swainson's hawk, a 0.25-mile no-work buffer will be implemented between construction activities and the active nest(s) until it has been determined that the young have fledged or as otherwise approved through consultation with CDFW. The wildlife biologists will mark the no-work buffer with stakes and signs and will check the location to ensure that the signs are in place and the buffer is being maintained. No work will be authorized within the buffer during the breeding season, except for vehicle travel.

If a 0.25-mile buffer around the nest cannot be maintained, the Applicant and a qualified wildlife biologist will consult with CDFW about alternative protective measures that are sufficient to minimize the risk of nest disturbance, such as a reduced buffer with full-time nest monitoring by a qualified wildlife biologist. If nesting SWHA exhibit agitated behavior indicating stress, the qualified Biological Monitor will have the authority to halt construction in that area until the Applicant has consulted with CDFW to determine if additional measures are required.

**PD BIO-7: Notification to the California Natural Diversity Database.** If any special status species are detected during Project surveys or during Project activities, the Applicant shall submit CNDDB Field Survey Forms to CDFW in the manner described at the CNDDB website (https://www.wildlife.ca.gov/Data/CNDDB/Submitting-Data) within 5 working days of the sightings.

**PD CUL-1. Designated Cultural Resources Specialist:** Prior to Project construction-related, ground disturbing activities (e.g., vegetation removal, excavation, trenching, grading, etc.), the Applicant/Project Owner will retain a designated Cultural Resources Specialist (CRS) who will be available (on-call) during the initial ground disturbance portion of the construction periods to inspect and evaluate any finds of buried archaeological resources that might occur during the construction phase. The CRS will meet the Secretary of the Interior's Qualification Standards and Guidelines for Archaeology and Historic Preservation (e.g., someone with a graduate degree in anthropology, history, or cultural resource management and fieldwork experience). The CRS will be qualified, in

addition to site detection (precontact and historic), to evaluate the significance of the deposits, consult with regulatory agencies, and plan site evaluation and mitigation activities. The CRS will supervise and direct cultural resource monitors (CRM). The Applicant/Project Owner shall submit the name and qualifications of its designated CRS to the CEC compliance project manager (CPM) for review and approval. The CEC CPM must approve the designated CRS prior to any ground disturbance.

If there is a discovery of archaeological remains during construction, the CRS, in conjunction with the construction superintendent and environmental compliance manager, will make certain that construction activity stops in the immediate vicinity of the find until the find can be evaluated. The CRS will inspect the find and evaluate its potential significance in consultation with CEC staff and the CEC CPM. The CRS will make a recommendation as to the significance of the find and any measures that will mitigate adverse impacts of construction on a significant find.

- If the CRS and CPM determine that the find is significant, the CRS will prepare and conduct a mitigation plan in accordance with state guidelines. This plan will emphasize the avoidance, if possible, of significant archaeological resources. If avoidance is not possible, recovery of a sample of the deposit from which archaeologists can define scientific data to address archaeological research questions will be considered an effective mitigation measure for damage to or destruction of the deposit. The mitigation program, if necessary, will be carried out as soon as possible to avoid construction delays.
- The CRS will arrange for curation of archaeological materials collected during an archaeological data recovery mitigation program. Curation will be performed at a qualified curation facility meeting the standards of the California Office of Historic Preservation. The CRS will submit field notes, stratigraphic drawings, and other materials developed as part of the data recovery/mitigation program to the curation facility along with the archaeological collection, in accordance with the mitigation plan.
- If a data recovery program is planned and implemented during construction as a mitigation measure, the CRS will prepare a detailed scientific report summarizing results of the excavations to recover data from an archaeological site. This report will describe the site soils and stratigraphy, describe and analyze artifacts and other materials recovered, and draw scientific conclusions regarding the results of the excavations. This report will be submitted to the curation facility with the collection.

Once this process has been completed and the proper approvals received, construction within the area of the find can be resumed.

**PD CUL-2. Cultural Resource Worker Education/Training[20]:** Prior to Project construction-related, ground-disturbing activities (e.g., vegetation removal, excavation, trenching, grading), the designated CRS will prepare a cultural resource worker education awareness program for Project construction personnel. The designated CRS will prepare the initial cultural resource briefing of the worker education awareness program prior to ground-disturbing activities. This training will be provided to each construction worker as part of their environmental, health, and safety training. During construction, the

[20] Appendix B (g) (2) (E) (iii)

training will be provided to all new construction personnel. The training also will be presented in the form of a written brochure. The cultural resource training will include, but not limited to:

- An overview of applicable laws and penalties pertaining to disturbing cultural resources;
- A brief discussion of the prehistoric and historic regional context and archaeological sensitivity of the area;
- Types of cultural resources found in the area;
- Instruction that Project workers will halt construction if a cultural resource is inadvertently discovered during construction; and
- Procedures to follow in the event an inadvertent discovery (Inadvertent Discovery Plan discussed below) is encountered, including appropriate treatment and respectful behavior of a discovery (e.g., no posting to social media or photographs).

**PD CUL-3. Archaeological and Native American Cultural Resource Monitors:** Prior to ground-disturbing construction activities, the Applicant will retain a qualified archaeological CRM and a Native American tribal cultural resource monitor (TCRM) to monitor if necessary for the Project. The CRM will work under the supervision of the designated CRS. The TCRM will work in coordination with the CEC, CRS, and CRM. The CRM monitor(s) shall be present during the initial grading and ground disturbing Project site preparation. The potential for encountering buried deposits shall be assessed by the CRS based on the initial subsurface ground-disturbing activities and geoarchaeological sensitivity of the Project site. The initial assessment (in consultation with CEC staff and TCRM) shall prescribe the type and duration for monitoring ground disturbance (i.e., intermittent field checks or on-site full time). The following shall occur during monitoring (including but not limited to):

- The CRM shall conduct archaeological monitoring of construction ground disturbance, as directed by the CRS.
- The CRM shall prepare a daily monitoring log and submit it daily to the CRS via email. The CRS will provide a daily summary to CEC compliance staff. The CRM shall document the construction activity and depth of ground disturbance, name of construction company and staff conducting the ground disturbance, soil profile, any findings and procedures followed, a map illustrated where monitoring occurred on the Project site, and any incidents of non-compliance issues with cultural resources.
- The CRM/TRCM will have the authority to halt or redirect construction in the event of an inadvertent discovery and will follow the protocols outlined in the Inadvertent Discovery Plan (**PD CUL-4**); cultural resource monitoring activities are the responsibility of the CRS. Any interference with monitoring activities other than the designated CRS (e.g., removal of a CRM, redirect and relocate monitoring location, etc.) shall be considered in non-compliance.

**PD CUL-4. Inadvertent Discovery of Archaeological Resources During Construction:** The designated CRS, a Secretary of the Interior-qualified archaeologist (retained by the Applicant/Project Owner), shall prepare an Inadvertent Discovery Plan for the Project. The Inadvertent Discovery Plan will provide protocols and notification procedures in the event of an inadvertent discovery. During Project construction (e.g., ground-disturbing activities, such as vegetation removal, excavation, trenching, grading), should subsurface archaeological resources be discovered, all ground-disturbing

activities within 50 feet of the find shall cease and the qualified archaeologist shall be contacted to assess the significance of the find according to CEQA *Guidelines* Section 15064.5. If any find is determined to be significant, the archaeologist shall determine, in consultation with the implementing agencies and any local consulting Native American groups expressing interest, appropriate avoidance measures or other appropriate mitigation. Under CEQA *Guidelines* Section 15126.4(b)(3), preservation in place shall be the preferred means to avoid impacts to archaeological resources qualifying as historical resources. Methods of avoidance may include, but shall not be limited to, Project reroute or redesign or identification of protection measures, such as capping or fencing. Consistent with CEQA *Guidelines* Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures, such as data recovery or other appropriate measures, in consultation with the implementing agency and any local consulting Native American representatives expressing interest in prehistoric or tribal resources. If an archaeological site does not qualify as a historical resource but meets the criteria for a unique archaeological resource as defined in Section 21083.2, then the site shall be treated in accordance with the provisions of Section 21083.2.

**PD CUL-5. Inadvertent Discovery of Human Remains:** If human remains are found during any grading or subsurface excavation of the Project site, all activity within a 50-foot radius of the find will be stopped. The Solano County Coroner will be notified as required by the existing California Health and Safety Code (Section 7050.5). The coroner shall determine whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the coroner determines that the find is Native American, he or she must contact the NAHC. The NAHC, as required by PRC Section 5097.98, will identify and notify the Most Likely Descendant. Once NAHC identifies the most likely descendant(s), the descendant(s) will make recommendations as to the disposition of the human remains. Mitigation measures shall comply with the Health and Safety Code, section 7050.5(b).

**PD GEO-1: Paleontological Resources Mitigation and Monitoring Plan:** The Project's Paleontological Resource Specialist (PRS) will develop a Paleontological Resources Mitigation and Monitoring Plan (PRMMP) prior to the commencement of ground-disturbing activities at the Project site. The plan will outline pre-construction coordination, monitoring procedures, emergency discovery procedures, sampling and data recovery, museum storage coordination with an accredited institution or facility for any specimen and data recovered, and final reporting.

**PD GEO-2: Worker Environmental Awareness Training:** Prior to the start of construction, the PRS or a qualified paleontological monitor will provide an environmental awareness training to all construction personnel involved with ground-disturbing activities. The training will provide information about the potential for encountering fossils during construction, how to identify fossils, and the protocols to follow in the case of any fossil discoveries, including proper notification procedures.

**PD GEO-3: Paleontological Monitoring:** Prior to construction, the PRS will review the excavation plans to determine whether paleontologically sensitive stratigraphic units may be disturbed by Project-related ground-disturbing activities. Ground-disturbing construction activities and/or areas where the Project will disturb previously undisturbed sediments within sensitive stratigraphic units will be monitored by a qualified paleontological monitor. Monitoring will not take place in areas

where the ground has been previously disturbed, in areas underlain by artificial fill, or in areas where exposed sediment will be buried but not disturbed. Monitoring procedures will include measures to suspend monitoring if construction activities are restricted to previously disturbed fill and to adjust monitoring protocols based on updated evaluations of sensitivity subsequent to initial excavations. The PRMMP prepared pursuant to **PD GEO-1** above will outline the site-specific locations for monitoring activities and compliance with those requirements will satisfy the specifics of **PD-GEO-3**.

**PD HAZ-01:** An HMBP will be developed and implemented prior to receiving hazardous materials onsite in excess of reportable quantities during construction and operation.

**PD HAZ-02:** An SPCC Plan will be developed and implemented prior to storing petroleum products onsite in excess of 1,320 gallons during construction and operation.

**PD HAZ-03**: Prior to construction, the Applicant will perform a limited site investigation to collect and analyze representative surface and shallow soil samples for residual agrichemical constituents, including organochlorinated compounds and metals. If there are contaminants identified in areas of the Project site to be disturbed that exceed both published naturally occurring background levels and applicable screening levels (SLs) published by the California Department of Substances Control (DTSC 2022) for the protection of future commercial/industrial workers, the Applicant shall be required to prepare and submit a Soil Management Plan (SMP). The contaminated portions of the Project site above applicable SLs shall be managed in place or removed and disposed of in accordance with the approved SMP; any contaminated soil above applicable SLs removed from the site shall be disposed of at a licensed non-hazardous or hazardous materials disposal site based on environmental testing of the soil and corresponding disposal requirements.

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.

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 is encountered during construction;
- Development of cleanup levels as based on DTSC modified screening levels (DTSC 2022);
- 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.

**PD HAZ-04**: Prior to construction, the Applicant will prepare and submit a Project Construction Health and Safety Program containing the following:

Construction Injury and Illness Prevention Program;

Construction Personal Protective Equipment Program;

Construction Emergency Action Plan; and

Construction Fire Prevention Plan.

**PD HAZ-05**: Prior to operations, the Applicant will prepare and submit an Operations and Maintenance Health and Safety Program containing the following:

- Injury and Illness Prevention Program;
- Personal Protective Equipment Program;
- Emergency Action Plan; and
- Fire Prevention Plan.

**PD HAZ-06:** Prior to commencing construction, a site-specific Construction Site Security Plan for the construction phase shall be prepared and made available to the Compliance Project Manager (CPM) for review and approval. The Construction Site Security Plan shall include the following:

- Perimeter security consisting of fencing enclosing the construction area;
- Security measures during hours when construction personnel are not present at the site;
- Site access control consisting of a check-in procedure or tag system for construction personnel and visitors;
- Written standard procedures for employees, contractors, and vendors when encountering suspicious objects or packages on site or off site;
- Protocol for contacting law enforcement and the CPM in the event of suspicious activity, incident, or emergency; and,
- Evacuation procedures.

**PD HAZ-07:** The Project owner shall also prepare a site-specific security plan for the commissioning and operational phases that would be available to the CPM for review and approval. The Project owner shall implement site security measures that address physical site security and hazardous materials storage. The level of security to be implemented will be consistent with applicable North American Electric Reliability Corporation security guidelines.

**PD HYD-01**: Site drainage plans will be in conformance with the Solano County Hydrology Manual (SCWA 1999) and Solano County land development standards (Solano County 2006).

**PD HYD-02**: A SWPPP will be developed and implemented during construction activities in accordance with the California NPDES General Permit for Construction Activity. The SWPPP will include BMPs to control erosion and sediment transport, and limit discharge of pollutants during construction.

**PD HYD-03**: Appropriate stormwater drainage design and erosion control measures will be provided for the Project to minimize soil erosion and sediment transport associated with runoff from the site during operations.

**PD NOISE-1:** To ensure that operational noise impacts are less than significant, the Project will include a sound barrier on the north side of the Project. The sound barrier will be 15 feet in height and will have a mass density of at least 4 $lb/ft^2$ or a minimum STC of STC-27 with no cracks or gaps.

**PD TRANS-01:** A construction traffic management plan (TMP) will be developed and implemented prior to Project construction.

## 2.9 References

SID (Solano Irrigation District). 2018. 2018 Water Management Plan. Prepared by Davids Engineering, Inc. November. Available online at: https://www.sidwater.org/DocumentCenter/View/1695/2018-Agricultural-Water-Management-Plan-AWMP (accessed February 2025).

SID ~~(Solano Irrigation District)~~. 2024. Construction Water. Available online at: https://www.sidwater.org/175/Construction-Water (accessed August 2024).