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SECTION 3.0 PROJECT DESCRIPTION

3.1 OVERVIEW OF PROPOSED GENERATING FACILITIES

The GBGF will be a backup generating facility with a generation capacity of up to 96 MW to support the need for the GDC to provide uninterruptible power supply for its servers. The GBGF will consist of 50, 2.5 MW diesel-fired emergency backup generators, arranged in two generation yards, each designed to serve one of the two data center buildings that make up the GDC. Project elements will also include switchgear and distribution cabling to interconnect the two generation yards to their respective buildings. In addition, the GBGF will include three smaller emergency generators; two house power diesel fired generators, each capable of generating 600 kW to support its respective building phase in an emergency; and a 175 kW diesel fired emergency generator to support a security building. The GBGF will also include two Battery Energy Storage System (BESS) facilities, each with a current maximum estimated storage capacity of up to 50 MW and up to 670 MWh discharge capacity.

3.2 GENERATING FACILITY DESCRIPTION, CONSTRUCTION AND OPERATION

3.2.1 Site Description

The GDC site is an undeveloped parcel generally located at located east of Arroyo Circle and between the two segments of Camino Arroyo within the City of Gilroy (APN 841-69-039). The parcel is approximately 56 acres in size and up until recently was in active agricultural production but is now proposed for industrial development, consistent with the General Industrial zoning and General Plan designations on the site. The site is bounded by active agricultural lands to the east, active agricultural land and existing urban development to the south, existing urban development and Arroyo Circle to the west and existing urban development to the north. The majority of the surrounding development is zoned and designated as General Industrial with the exception of one parcel which is identified as Shopping Center Commercial. The subject parcel has access to the Camino Arroyo cul-de-sac to the north and Camino Arroyo/Arroyo Circle knuckle to the south.

The site is near the Highway 101 corridor and immediately adjacent to industrial and commercial development. The topography is flat with views of western and eastern foothills from public viewpoints (refer to Figures 3.2-1, 3.2-2, and 3.2-3).

3.2.2 General Site Arrangement and Layout

The emergency backup generators will be located at the site in generation yards at two separate locations within the GDC. Each generation yard will be adjacent to the building it serves. Figure 3.2-4 shows the general arrangement and site layout of the GBGF within the GDC site. Twenty-six (26) of the emergency backup generators will be dedicated to support the GDC western building, which is designated as Phase I (2 generators are redundant). Twenty-four (24) of the backup generators will be dedicated to support the GDC eastern building, which is designated as Phase II (2 generators are redundant). Additionally, each generator yard will also include one house power generator as shown on Figure 3.2-4.

The BESS facilities have not yet undergone final design. ADS is considering constructing a BESS at two locations within the current site boundary; one within the eastern portion of the site and one within the area identified for the on-site substation. Both locations are shown on Figure 3.2-5-. Figure 3.2-6 includes a more detailed layout and elevation of the BESS facility to be located within the substation area. Figure 3.2-7 includes a single-line diagram of one of the BESS facilities.

And lastly, there will be a site security building emergency generator, with a peak generating capacity of approximately 175 kW. The site security building emergency generator will be located adjacent to the site security building as shown on Figure 3.2-4.

Figure 3.2-1: Regional Map

Figure 3.2-2: Vicinity Map

Figure 3.3-3: Aerial Photograph and Surrounding Land Uses

Figure 3.2-4: Site Plan

Figure 3.2-5: BESS Site Plan

Figure 3.2-6: BESS Layout and Elevation in Substation

Figure 3.2-7: BESS Single-Line Diagram

As shown in Figure 3.2-4, the larger lineup generators are aligned in the building service yards in the generator yard that services each respective building. Each generator is provided with a belly fuel tank with a storage capacity of 5,000 gallons. Each of the two house power generators will be located within the generation yard supporting its respective building and will have a belly fuel tank with a storage capacity of 1,000 gallons. The security building generator will be located as shown on Figure 3.2-4 and will also have a belly fuel tank with a storage capacity of 1,000 gallons.

Each generation yard will be electrically interconnected exclusively to the building it serves through an above ground cable bus to a location within the building that houses electrical distribution equipment. The house generator and security building emergency generators will connect to their respective buildings via underground conduit ductbank.

3.2.3 Generating Capacity

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

1. ~~1.~~ The GBGF uses internal combustion engines and not turbines.
2. The GBGF would include two BESS facilities. BESS technology is a non-thermal energy storage asset and is not a thermal power plant. Therefore, its electrical discharge capacity is not subject to CEC jurisdiction and should not be used in determining electrical generating capacity.
3. The GBGF is controlled exclusively by the GDC through software technology and electronic devices.
4. The GBGF has been designed to deliver up to 96 MW during an emergency on the hottest design day; 50 MW for Phase I and 46 MW for Phase II.
5. Each Phase includes two completely redundant generators.
6. The GBGF will include a total of two, 600 kW house and life safety emergency generators; each serving its respective building. Additionally, a single 175 kW emergency generator will serve the security building.
7. The GBGF will only be operated for maintenance, testing and during emergency utility power outages.
8. The GBGF will only operate at a load equal to the demand by the GDC during an emergency utility outage.
9. The GBGF is not interconnected to the transmission grid.

Based on the methodology adopted by the Commission's most recent Final Decisions Granting SPPEs[1] , the maximum generating capacity of the GBGF is determined by the maximum of capacity of the load being served. The maximum capacity of the load being served is the maximum demand of the GDC at total Critical IT on its design day. In addition to using the maximum data center demand,

[1] McLaren Backup Generating Facility (17-SPPE-01), CEC-800-2018-003-CMF; Laurelwood Data Center (19-SPPE-01) CEC-800-2020-001-CMF; Walsh Backup Generating Facility (19-SPPE-02), CEC-800-2020-002-CTF; ~~and~~ Mission College Backup Generating Facility (19-SPPE-05), CEC-800-2020-003-CTF, and Sequoia Backup Generating Facility (19-PPE-03), CEC-700-2020-005.

the following information is provided to describe the unique features of a backup generating facility such as the GBGF.

3.2.3.1 *Data Center Load Demand*

The preferred and most accurate way to calculate the generating capacity of the GBGF is to recognize that the load of the backup generators is completely dictated by the demand of the data center. Using this methodology reflects the most accurate way of describing the relationship between the GBGF and the GDC and describes the actual physical constraint to the generating capacity. In other words, the GDC employs physical electronic devices and software technology (Automatic Throw-over main breakers, Building Load Management System) that limits the output of the GBGF.

The GDC will include load management software and electronic equipment that will automatically adjust the output of the GBGF based only on the demand of the GDC. The demand of the data center is not some ethereal concept derived for purposes of determining generating capacity, but is instead a physical constraint that is not controlled by ADS, but rather controlled through software and electronic control devices that match the output of the GBGF during a power outage where PG&E cannot serve the GDC load. The fact that the GBGF is not electrically connected to anything other than the data center creates this unique factual circumstance.

This unique situation must be distinguished from the case of a conventional power facility that is interconnected to the transmission grid and responds to calls from the California Independent System Operator (CaISO). In the case of a conventional power facility, the CaISO, can call on any portion of the generator's capacity, including its maximum generating capacity, as the CaISO can direct the electricity to different parts of the system. For the GBGF there is only one place the electricity can go – the GDC. Therefore, the most accurate way of calculating generating capacity from a backup generating facility that solely supports a data center is to understand the potential load of the receiving data center.

It is also important to note that the design demand of the GDC, which the GBGF has been designed to reliably supply with redundant components during an emergency, is based on the maximum critical IT load occurring during the hottest ASHRAE design day temperature for this facility. Such conditions are possible but extremely unlikely to ever occur. As described in more detail below, the GDC load for both Phases on that worst case day is 96 MW, below the SPPE jurisdictional threshold.

GDC Phase I Building will have 2 large data hall server rooms designed to provide 21.53 MW of Critical IT each, for a total Critical IT load of 43.06 MW. The total Non-IT building load for Phase I for the hottest design day is 6.76 MW, plus 0.3 MW for the site security building and pump station, which will be installed as part of Phase I construction. Therefore, the maximum GDC Phase I building load is 43.06 MW Critical IT + 7.06 MW of Total Non-IT Building Load, or 50.13 MW.

The GDC Phase II Building is identical to the Phase I Building, with the exception of one of the two large data hall server rooms being smaller to accommodate warehouse and other uses. The Phase II building is designed to provide a total Critical IT load of 39.55 MW. The total Non-IT building load for Phase II for the hottest design day is 6.15 MW. Therefore the maximum GDC Phase II building load is 39.55 MW Critical IT + 6.15 MW of Total Non-IT building load, or 45.71 MW.

Therefore the maximum electrical demand of the GDC at full buildout of both phases would be 50.13 MW (Phase I) + 45.71 MW (Phase II) = 95.84 MW, hereinafter rounded to approximately 96 MW.

It is important to note that the average ambient temperature conditions for a data center in the Gilroy area are much lower than the hottest design day. The average total Non-IT building load is expected to be approximately 5.21 MW for Phase I and 4.48 MW for Phase II, for an average GDC electrical demand of the GDC at full buildout of both phases of 85.5 MW.

The data center industry utilizes a factor called as the Power Utilization Efficiency Factor (PUE) to estimate the efficiency of its data centers. The PUE is calculated by dividing the total demand of the data center by the Critical IT load. For the worst case day the peak PUE for the GDC at full buildout of both buildings would be 1.16 (Total 95.84 MW total electrical demand on Worst Case Day divided by 82.62 MW Total Critical IT Load). The average PUE for the GDC at full buildout of both buildings would be 1.18 (Total 85.5 MW demand of Building average conditions divided by 72.29 MW Expected Critical IT Load).

3.2.3.2 *Regulatory Capacity Restriction*

The Commission should also consider that ADS is currently in negotiations with PG&E to supply electricity to the GDC. PG&E has committed to provide a will-serve letter that confirms its commitment to provide up to 98 MW of electrical power to the GDC, which will be provided under separate cover when received. ADS requested PG&E to deliver up to 15 MW of power to launch the site. Once the substation energizes the 15 MW, service will be abandoned and the site will take power from the PG&E substation. The Substation Agreement with PG&E will contractually cap the amount of electricity delivered to the GDC to less than 98MW to reflect the current data center and substation design. Notwithstanding the building design's maximum electrical demand, the Commission could also rely on the will serve letter that PG&E will not deliver more than 98 MW to the site. If PG&E limits the delivery of less than 98 MW to the site the GBGF, which would replace that electricity during an emergency when PG&E is unable to deliver, would never produce electricity in excess of 98 MW.

3.2.4 Backup Electrical System Design

3.2.4.1 *Overview*

To place the role of the GBGF into context, the following information about the overall GDC design is provided. The design objective of the backup electrical system is to provide sufficient equipment and redundancy to ensure that the servers housed in the GDC buildings will never be without electricity to support critical loads. The critical loads include the load to support the building operation in addition to the electricity consumed by the servers themselves. The largest of these non-server serving building loads is to provide cooling for the server rooms.

For backup supply for a Data Center, it is commonplace to build levels of systems and equipment redundancy and concurrent maintainability into the overall electrical and mechanical infrastructure. The base quantity of systems that are required to serve the design load of the facility is referred to as "N". When reliability requirements dictate that redundant systems are added to the base quantity of systems, it is commonplace in the industry to refer to the number of redundant systems as "X" in the representation "N+X".

Each electrical system will consist of an Uninterruptible Power Supply (UPS) system that will be supported by batteries and a means for automatic switching between UPS and normal power. The UPS system that will be deployed at the GDC to provide backup to the IT loads will consist of two power shelves within each individual rack. Each rack power shelf will consist of 6 N+1 3kW automatic transfer switching power supply units (ATSPSUs) and lithium ion battery backup units (BBUs). The BBUs are designed to deliver 15kW of power.

The UPS systems provided for all non-IT loads will consist of a 100kW rated UPS system provided with the house power service for emergency backup to the fire suppression system and electrical and mechanical controls in office spaces, and 20kW rated UPS systems provided with each electrical lineup for emergency backup to the electrical and mechanical controls for IT, electrical, and mechanical rooms. For each 600kW house power generators, one of these 100kW UPS systems is provided. A similar 20kW rated UPS system will be deployed for the Site Security building.

3.2.4.2 *UPS System and Batteries*

The UPS System and Batteries are part of the GDC and are not part of the GBGF. The load will be automatically transferred to the bypass line without interruption in the event of an internal UPS malfunction. The UPS will operate in the following modes:

- **Normal Conditions (Double Conversion, IGBT):** Load is supplied with power flowing from the normal power input terminals, through the rectifier-charger and inverter, with the battery connected in parallel with the rectifier-charger output.

- **Normal Conditions (Delta conversion):** The output inverter and input (Delta) converter shall operate in an on-line manner to continuously regulate power to the critical load. The input power converter and output inverter shall be capable of full battery recharge while simultaneously providing regulated power to the load for all line and load conditions within the range of the UPS specifications.

- **Abnormal Supply Conditions:** If normal supply deviates from specified and adjustable voltage, voltage waveform, or frequency limits, the battery supplies energy to maintain constant, regulated inverter power output to the load without switching or disturbance.

- **Power Failure:** If normal power fails, energy supplied by the battery through the inverter continues supply-regulated power to the load without switching or disturbance.

When power is restored at the normal supply terminals of the system, controls shall automatically synchronize the inverter with the external source before transferring the load. The rectifier-charger shall supply power to the load through the inverter and simultaneously recharge the battery.
If the battery becomes discharged and normal supply is available, the rectifier-charger shall charge the battery. The rectifier-charger shall automatically shift to float-charge mode on reaching full charge.

If any element of the UPS system fails and power is available at the normal supply terminals of the system, the static bypass transfer switch shall switch the load to the normal ac supply circuit without disturbance or interruption.

Should overloads persist past the time limitations, the automatic static transfer switch shall switch the load to the bypass output of the UPS. When the fault has cleared, the static bypass transfer switch shall return the load to the UPS system.

If the battery is disconnected, the UPS shall supply power to the load from the normal supply with no degradation of its regulation of voltage and frequency of the output bus.

3.2.4.3 *UPS Batteries*

Similarly, the UPS batteries are not part of the GBGF and are described here for informational purposes only. The UPS batteries will be lithium-ion and supplied by LG, Samsung, or Toshiba. The UPS batteries are provided in a one string configuration within a cabinet with each UPS. UPS ~~B~~batteries will have a minimum design life of approximately 12 years in float applications at 64.4-82.4 degrees F. Lithium ion batteries report cell properties to the UPS, which is monitored by EPMS for statuses and alarming.

The UPS batteries will be configured in banks with matching standalone batteries with the following characteristics:

a. Each battery bank will provide a minimum of 12 minutes of backup at 100% full load UPS current, @ 64-82 deg F, 3 end volts per cell, beginning of life.

b. Internal cabinet temperature sensor to be wired back to the UPS module.

c. Battery type is Lithium Manganese Oxide / Nickel Manganese Cobalt Oxide mix (LMO/NMC)

3.2.5 BESS Overview

Each BESS will have a capacity of up to 50 MW with up to 670 MWh discharge capacity. It consists of 12 ESS blocks. Each ESS block consists of a cluster of bi-directional inverters with a bank of Li-ion batteries coupled with a 5MVA transformer. Lithium-Ion BESS are a fully pre-packaged solution which house battery packs, required cooling system, auxiliary power distribution system and DC power aggregation and protection system. There are multiple layers of battery management system (BMS) built into the BESS to ensure safe operating conditions and eliminate single point of failure. A cluster of the MV transformers will connect in daisy chain and feed into a feeder breaker. This MV collection with main MV breaker will feed into the existing MV transformer.

The BESS will charge from the PG&E and/or CAISO grid. Operations shall be controlled via a centrally located Energy Management System (EMS) which shall connect with the ADS operations center and will be programmed to receive dispatch directives in the case of an energy curtailment. The EMS system monitors critical BESS ratings such as state of charge (SOC), BESS State of Health, BESS temperatures, BESS alternating current (AC) and direct current (DC) voltages,

currents, cumulative grid charging percentage (as applicable), and other key performance metrics. All would be available via a supervisory control and data acquisition system (SCADA).

3.2.5.1 *BESS Equipment*

ADS is committed to using best-in-class technology for the BESS although the specific battery has not yet been identified. The table below provides the technology currently assumed in the design.

BESS Technology Equipment	
Batteries	CATL liquid cooled BESS or equivalent manufacturer • LFP chemistry • Or equivalent technology (e.g., NMC, etc.) • Duration: / BESS: 13 hours @ 50 MW • Peak Charge Rate: 50 MW • Peak Discharge Rate: 50 MW • Maximum SOC: 100% • Minimum SOC: 3% • # of Cycles: Up to 365 cycles per year / 1 Cycle = Discharge of BESS MWh capacity / For a 50-MW_{ac} (13-hour) BESS, 1 Cycle = 650 MWh / A cycle can be made up of many partial cycles, and energy can be utilized in any combination of power and duration without restriction on the number of starts and stops of the BESS • Roundtrip Efficiency: 85% BESS capacity shall be restored by periodic augmentation to ensure AC capacity is available.
Battery Structure	Batteries shall be housed either in purpose-built battery containers or in an outdoor enclosure with appropriate environmental controls. Battery housing space will contain an industrial-rated cooling system for batteries, fire deection and suppression system, AC and DC power distribution, and other required electrical safety and protection systems.
BESS Inverter	Central or distributed bi-directional battery storage inverters with LV/MV step-up transformer: • Central Inverter Model #: SMA SCS-3600 (or equivalent) • Distributed Inverter Model: Tesla or equivalent 75kW • Peak Efficiency: ~ 98.7% • Operation: Bi-directional, 4-quadrant capable • Response Time: <1 second • SMA transformers are manufactured in US. • Or equivalent technology

3.2.5.2 *BESS Fire Safety*

A fire detection system is also integrated in the design and manufacture of each block to monitor operational environment for smoke and fire components and safely shut down the BESS In emergency situations. The fire detection system identifies any components lagging in performance so suspect parts can be addressed via the preventative maintenance program. The fire safety system will meet all federal and state standards and the BESS facilities will comply with NFPA 855, IEEE 1547, and UL (9540, 9540A, 1741SA, 1973)

3.2.5.3 *BESS Operations*

An EMS will be installed on site that will provide a SCADA interface and control BESS operations. As available, the BESS will provide electricity to the data center buildings in the event of an electrical outage. If possible, the BESS will be utilized in an outage situation prior to dispatch of the GBGF generators.

The BESS will be charged from the electrical grid through either the interim 21 kV line or through a future interconnection based on the final PG&E interconnection option. It is possible that in the future one or both of the BESS facilities could be interconnected to provide grid services, however, at this time such future operations and interconnection are too speculative to predict the potential effects of such future operations and therefore are not part of the current project description. Therefore the foreseeable plan of operations is limited to behind the meter operations and discharge of electricity to the GDC only.

~~3.2.5~~ 3.2.6 Backup Electrical Generation Equipment

Each of the larger 50 lineup generators will be a Tier-2 emergency diesel-fired generator equipped with a Rypos HDPF/C diesel particulate filter (DPF) and a Miratech AT-IV abatement package which combines the DPF, SCR, and diesel oxidizing catalyst (DOC). The generators will be 3,634 bhp, Caterpillar Model D3516C. The critical backup generators will be Tier 4F-compliant. The maximum peak generating capacity of each model is 2.5 MW with a steady state continuous generating capacity of 1.75 MW.

Each of the two life safety generators will be a 900 bhp, Caterpillar Model C-18, Tier-2 emergency diesel-fired generator equipped with a Rypos HDPF/C DPF. The maximum peak generating capacity of this model is 600kW with a continuous generating capacity of 420kW.

The security building generator will be a 280 bhp, Caterpillar model C7.1, Tier-3 emergency diesel-fired generator. The maximum peak generating capacity of this model is 175.

Specification sheets for each manufacturer and evidence of the steady state continuous ratings are provided in Appendix C.

The DPF for the critical backup generator model and life safety generator model is verified by the California Air Resources Board (CARB) for model years 1996 through 2020 under Executive Order DE-07-001-08 to reduce emissions of diesel particulate matter by 85% or more (CARB, 2020a). The

Executive Order specifically notes the DPF is designed for standby engines, which typically operate at various loads. Furthermore, the Executive Order notes that duty cycles of the standby engines which are approved under the Executive Order are reviewed to ensure compatibility DPF, meaning that the DPF is compatible at all duty loads.

The generators will use ultra-low sulfur diesel which has a sulfur content of 0.0015% as defined under 40 CFR 80, Subpart I. The generators will each be equipped with a flapper-type rain cap which is a hinged cap that opens to release exhaust vertically into the atmosphere when the generator is operating.

Each individual generator will be provided with its own package system. Within that package, the prime mover and alternator will be made ready for the call for immediate power. Each lineup generator is provided with a belly fuel tank with a storage capacity of 5,000 gallons. Each of the two house power generators will be located within the generation yard supporting its respective building and will have a belly fuel tank with a storage capacity of 1,000 gallons. The security building emergency generator will have a belly fuel tank with a storage capacity of 1,000 gallons.

See Figure 3.2-4 for Phase I and Phase II Configuration.

The CAT 3516C generators and enclosures are approximately 11 feet 10 inches wide, 44 feet 8 inches long and 13 feet 6 inches high. Each generator will have a stack height of approximately 31 feet. The stacks will exhaust vertically and will not have rain caps. When placed on concrete equipment pads, the generators will be spaced approximately 10 feet apart in pairs of two horizontally, while pairs are further separated by approximately 27 feet.

The CAT C18 house power generators and enclosures are approximately 18 feet 10 inches long, 6 feet 7 inches wide, and 9 feet 6 inches tall and will have a stack height of approximately 41 feet.

The CAT C7.1 security building generator enclosure will be approximately 3 feet 7 inches wide, 13 feet 3 inches long, and 8 feet 2 inches tall and will have a stack height of approximately 8 feet 2 inches.

Each generator yard will be located adjacent to the GDC building it serves. The generator yards will be enclosed with 8 feet high chain link fencing to separate them from the balance of the property.

Each of the 2.5MW generators for each phase will be connected to an individual lineup consisting of a Main Switch Board, where two of the generators/lineups are redundant. Each non-redundant lineup feeds a maximum of 1808 kW of critical IT load. All 26 generators and lineups for phase I and all 24 generator and lineups for Phase II are interconnected at the Main Switch Board level for each building, therefore should any one lineup fail, either of the two redundant lineups will have enough capacity to completely pick up the dropped load. During a utility outage, all non-redundant generators will start and be connected to their dedicated loads. If no more than 2 of the generator systems fail during the utility outage, the total maximum load of approximately 96 MW will supported by the generators, and will only be running at about 80% of the full capacity of the generator.

~~3.2.6~~ 3.2.7 Major Electrical Equipment and Systems

There will be an internal switchboard to the generator enclosure with a load disconnect breaker that is normally closed while the generator is both in and out of operation. From that load disconnect, 600V rated cable bus, rated for the full ampacity output rating of the generator, will traverse from the generator into the data center facility terminating on a dedicated main generator input breaker in the main switchgear. This breaker is an electrically operated breaker that is normally open when the generator is not in operation, and the main switchboard has not requested generator power. This generator main breaker is electrically interlocked with an adjacent utility transformer main breaker, such that the generator main breaker can never close unless the utility transformer main breaker is in the open state. The generator main breaker will only close based upon a generator start signal from a Programmable Logic Controller (PLC) control logic that indicates that the utility transformer main breaker's source power is unavailable, as well as the generator has started, and is producing 480VAC power, and the utility transformer main breaker is in the open state. Once the generator main breaker is closed, the power created from the individual generator is then transmitted to the dedicated load of the system. This load is the exact same load that the dedicated utility transformer was supplying power to prior to the utility interruption. Power from this individual generator cannot be transferred to any other load or system or anywhere outside the GDC.

~~3.2.7~~ 3.2.8 Fuel System

The backup generators will use ultra-low sulfur diesel as fuel (< 15 parts per million sulfur by weight). Each generator package will include an integrated fuel tank with a capacity of 5,000 gallons, or 1,000 gallons for the 600kW house power and the 175 kW security generators, which is sufficient for operating at steady state continuous load for at least 24 hours.

~~3.2.8~~ 3.2.9 Cooling System

Each generator will be air cooled independently as part of its integrated package and therefore there is no common cooling system for the GBGF.

~~3.2.9~~ 3.2.10 Water Supply and Use

The GBGF will not require any consumption of water.

~~3.2.10~~ 3.2.11 Waste Management

The GBGF will not create any waste materials other than minor amounts of solid waste created during construction and maintenance activities.

~~3.2.11~~ 3.2.12 Hazardous Materials Management

The GBGF will prepare a Spill Prevention, Control and Countermeasure Plan (SPCC) to address the storage, use and delivery of diesel fuel for the generators.

Each generator unit and its integrated fuel tanks have been designed with doublewalls. The interstitial space between the walls of each tanks is continuously monitored electronically for the existence of liquids. This monitoring system is electronically linked to an audible and visual alarm system that

alerts personnel if a leak is detected. Additionally, the standby generator units and integrated tank are housed within a self-sheltering enclosure that prevents the intrusion of storm water.

Diesel fuel will be delivered on an as-needed basis in a compartmentalized tanker truck. The tanker truck parks at the gated entrances to the generator yard for re-fueling.

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

To further minimize the potential for diesel fuel to come into contact with stormwater, to the extent feasible, fueling operations will be scheduled at times when storm events are improbable. Warning signs and/or wheel chocks will be used in the loading and/or unloading areas to prevent vehicles from departing before complete disconnection of flexible or fixed transfer lines. An emergency pump shut-off will be utilized if a pump hose breaks while fueling the tanks. Tanker truck loading and unloading procedures will be available at the offices.

~~3.2.12~~ 3.2.13 GBGF Project Construction

Construction of the GBGF will take place in two phases. Each phase represents a generation yard which will be constructed to serve each of the two GDC Buildings. Since the site preparation activities for the GDC will include the ground preparation and grading of the entire GDC site, the only construction activities associated with the GBGF would involve construction within each generation yard. This will include construction of concrete slabs, fencing, above ground cable bus to install the electrical cabling to interconnect to the GDC Building switchgear, construction of the racking system to support the second level of generators, and placement and securing the generators.

The generators themselves will be assembled offsite and delivered to site by truck. Each generator will be placed within its respective generation yard by a crane.

Construction of each generation yard and placement of the generators is expected to take six months and will be within the overall construction schedule identified in Section 3.3.2.3. Construction personnel are estimated to range from 10 to 15 workers per generation yard including one crane operator and this estimate is included in the estimate provided in Section 3.3.2.3.

~~3.2.13~~ 3.2.14 GBGF Facility Operation

The backup generators will be run for short periods for testing and maintenance purposes and otherwise will not operate unless there is a disturbance or interruption of the utility supply. BAAQMD's Authority to Construct and the California Air Resources Board's Airborne Toxic Control Measures (ATCM) limits each engine to no more than 50 hours annually for reliability purposes (i.e., testing and maintenance). However, it is ADS's experience that maintenance and testing of each engine rarely exceeds 12 hours annually. In addition, ADS proposes to limit operation to one engine at a time for routine testing activities, which will be conducted in accordance with manufacturer's recommendations. Please see Section 4.3 Air Quality and Appendix C for a complete

description of the testing and maintenance frequencies and loading proposed for the GBGF and Section 3.4 which includes operational proposed design measures to ensure air quality related impacts are reduced to less than significant levels.

3.3 GILROY DATA CENTER FACILITIES DESCRIPTION

3.3.1 Overview

As described in Section 1.2 and 1.3 of this application, the GDC is not part of the Commission's overall SPPE jurisdiction. However, we are providing the following complete description of the GDC in order for the CEC to provide a complete CEQA environmental document sufficient for the City of Gilroy to use for issuance of the land use authorizations and building permits for the GDC and the GBGF.

3.3.2 Complete Description of the GDC

The parcel is approximately 56 acres in size and is currently in active agricultural production. The site is bounded by active agricultural lands to the east, active agricultural land and existing urban development to the south, existing urban development and Arroyo Circle to the west and existing urban development to the north. Majority of the surrounding development is identified as general industrial with the exception of one parcel which is identified as shopping center commercial. The subject parcel has access to the Camino Arroyo cul-de-sac to the north and Camino Arroyo/Arroyo Circle knuckle to the south.

The subject project proposes to construct two data storage center buildings and on campus security building totaling approximately 438,500 square feet. Phase 1 will include a single-story data storage center building of approximately 218,000 square feet, including approximately 10,000 square feet of administrative office employee amenity space and one of the two BESS facilities. Additionally as part of the construction of Phase I the approximately 2,500 square feet security building will be erected. Phase I is intended to be in operation by 2023. Phase 2, if constructed, is anticipated to be constructed within 4 to 7 years of Phase 1, and will be a similar single-story data storage center building of approximately 218,000 square feet, including approximately 10,000 square feet of administrative office employee amenity space, and approximately 15,000 square feet of warehouse space. The second BESS is anticipated to be constructed during Phase II.

The ~~Both~~ structures, BESS facilities and the GBGF ~~would~~ have building pad elevations raised at or above the 0.2% annual chance flood elevation, otherwise known as the 500-year floodplain elevation.

The proposed data storage center buildings will house computer servers for private clients in a secure and controlled structure and will be designed to demand a total of approximately 96 megawatts (MW) of electricity. The structures will be architecturally treated to fit the surrounding context of the site. Mechanical equipment for buildings cooling will be housed inside the building along with exhaust baffles for exiting hot-air. Electrical and backup battery equipment rooms will be housed inside the building. The project will be served by either an onsite switchyard and~~a~~ new utility substation or a simple transmission line feed from nearby Llagas Substation, delivering less than 98 MW and will include two BESS facilities.

Backup generators capable of generating up to 96 MW will be located in an exterior equipment yard. The project will also include either an onsite switchyard and substation or a single transmission line feed from the nearby Llagas Substation to accommodate electricity to be delivered to the site by PG&E. There will be 2 water storage tanks approximately 36 feet high, with storage capacities of 60,000 gallons each, to store water for evaporative cooling.

The remainder of the site will be developed with a combination of parking, drive aisles, security guard shacks, stormwater treatment facilities, fencing and landscaping. Drive aisles will be located around the perimeter of the structures providing for looped circulation which will take access from the Camino Arroyo cul-de-sac at the north end of the project site. An emergency vehicle access route will be provided to the Camino Arroyo/Arroyo Circle knuckle to the south. The entire perimeter of the site will be enclosed with an 8-foot high security fence and access restricted to site employees and permitted visitors. A 100-foot agricultural buffer zone and 50-foot agricultural transition area will be provided along a portion of the southern boundary and the eastern boundary which abuts active agricultural lands. Stormwater treatment facilities will be located within this 150-foot buffer.

Appendix A contains a complete set of design drawings submitted to the City of Gilroy for review.

3.3.2.1 *Building Heights and Setbacks*

The data center buildings would be approximately 35 feet at the roof's high point with parapets extending to a height of 45 feet at the high point. The parapet walls extend to the height ten feet above the roof level to conceal the rooftop exhaust fans, other related mechanical and electrical equipment, and the roof access stair. The Phase 1 building will be built on the western portion of the site and will be set back approximately 100 feet from the northern property line at an adjacent lot on the western half of the lot, approximately 618 feet from the southern property line, and varying depths between 184 feet and 412 feet from the western property line with the adjacent development. The Phase II Building will be located in the eastern portion of the site and will be set back approximately 590 feet from the northern property line abutting an adjacent lot on the eastern side of the lot, approximately 618 feet from the southern property line, and approximately 215 feet from the eastern property line adjacent to agricultural land.

3.3.2.2 *Site Access and Parking*

Primary access to the site would be provided by two new proposed driveways, each approximately 35 feet in width, at the Camino Arroyo cul-de-sac on the northern side of the site. A third driveway entrance for emergency access would be constructed at Arroyo Circle on the southern portion of the site and would be approximately 35 feet in width. The project would provide approximately 115 parking spaces. Parking is spaced throughout the project site with a heavy concentration of parking along the north and south sides of the Data Center buildings. The project would provide adequate Electric Vehicle, Clean Air and Vanpool parking spaces per Cal Green requirements.

3.3.2.3 *Site Grading, Excavation, and Phasing*

For Phase I, construction activities would last approximately 11 months. Phase II construction is estimated to be completed in approximately 10 months. Phase I is intended to be in operation by 2023. Phase 2, if constructed, is anticipated to be constructed within 4 to 7 years of Phase 1. The existing site is located within the 100-year FEMA flood plain and will require fill to raise the site

above base flood elevation. Fill for both Phase I and Phase II buildings would be brought to the site as part of Phase I construction. Roughly 210,000 cubic yards of fill would be imported to the site to raise the base elevation by approximately four feet (1.5 feet above the base flood elevation).

Excavation for utilities would extend to depths of up to 15 feet below the new base elevation. The site would be graded to direct stormwater flows towards biotreatment areas located along the northern and southern boundaries of the site.

3.3.2.4 *Landscaping*

There are 18 trees present at the project site (including adjacent properties): five (5) private non-protected trees on-site, six (6) street trees adjacent to this property, one (1) street tree adjacent to a neighboring property, and six (6) trees overhanging from adjacent properties. The project proposes to remove all 18 existing trees: nine (9) existing trees, five (5) street trees and four (4) on-site trees. Trees are to be replaced per the City's tree replacement ratios. An Arborist Report is included in Appendix E.

Proposed landscaping will consist of trees and shrubs at the perimeter of the site, for screening, drought-tolerant shrubs, and groundcovers at main entries and adjacent to interior drive aisles and parking stalls. Large open spaces on-site, will be seeded with a non-irrigated mix that is tailored to the site conditions. A low-flow, efficient, potable-water irrigation system will be designed for all landscape areas planted with container plants.

3.3.2.5 *Stormwater Controls*

Under Provision C.3 of the Municipal Regional Stormwater NPDES Permit (MRP), new and redevelopment projects that create or replace 10,000 square feet or more of impervious surface area are required to implement site design, source control, and Low Impact Development (LID)-based stormwater treatment controls to treat post-construction stormwater runoff. LID-based treatment controls are intended to maintain or restore the site's natural hydrologic functions, maximizing opportunities for infiltration and evapotranspiration, and using stormwater as a resource (e.g. rainwater harvesting for non-potable uses). Examples of C.3 LID measures include bioretention areas, flow-through planters, and subsurface infiltration systems.

There are no stormwater treatment facilities at the site in the existing condition. Existing rainwater runoff infiltrates into the ground or is sheet-slowed toward the southern property line.

The project proposes to construct one stormwater treatment (bioretention) area totaling approximately 201,000 sf. The bioretention area would be located along the eastern and southern property boundary. The site would be graded to direct stormwater into the bioretention treatment area via multiple storm drain inlet and pipe networks throughout the project site. The treatment area would include perforated underdrains and overflow structures that would ultimately discharge into the public storm drain line in Arroyo Circle near the southern property boundary.

3.3.2.6 *Building Cooling System*

Data Hall Cooling

The data center utilizes a flooded room design with a common supply air header and supply air dampers discharging air from both sides of the data hall perimeter wall down each cold aisle. The supply air headers are located along one side of each mechanical DAHU (Data-hall Air Handling Unit) room and ties all DAHUs on each side of the data hall into a common supply air source. Airflow will discharge through row supply dampers in the supply air header with both controlled damper sections and manually adjustable damper sections. Fan wall data hall air handling units (DAHUs) are the primary cooling source for the data hall deployments. These units are installed in dedicated mechanical galleries on opposite sides of the data hall, and will draw in outside air through sidewall louvers. These units are capable of supplying 100% outdoor air for data center cooling and, when necessary, cool the outside air through the use of evaporative cooling. The DAHUs utilize evaporative media to evaporate water and cool the outside air to the supply air set-point determined by the control system.

Data hall pressurization requirements are maintained using rooftop exhaust fans (EFs). These fans modulate in unison to maintain space pressure throughout the control area uniformly. During part load conditions, fans stage off as necessary to maintain minimum fan airflow requirements.

Electrical Room Cooling

The data center utilizes multiple ductless split system DX heat pumps in the electrical room. The heat gain in these rooms is minimal, as there are no large transformers in the electrical rooms. This design requires five heat pumps in typical electrical rooms, and three units in catcher rooms.

Office Cooling

The data center office area utilizes a variable refrigerant volume (VRV) system with a dedicated outside air system (DOAS). The VRV system is broken up into three separate systems, each with multiple circuits. This provides cooling redundancy for the house electrical room. The ventilation requirements for the space are met with a ducted DOAS system.

3.3.2.7 *Site Water Supply and Use*

Site Grading and Construction. Grading and construction of the GCD including the GBGF is estimated to utilize 1.84 acre feet of water over the 21 month construction period for Phase I and Phase II.

GDC Operation. The GDC will require water when outside air temperatures exceed 83F. The data center will be designed to use recycled water when supply is available and provided by the City of Gilroy, and a potable water connection will be provided as a back-up source to the recycled water system in the interim period. Total water for cooling would be approximately 2.7 AFY per building phase for a total water use for cooling at full buildout of the GDC of approximately 5.4 AFY. Landscaping for the site is estimated to use up to 15.8 AFY. Potable and sanitary uses are on the order of 0.5 AFY per building.

ADS is currently working with the City of Gilroy relating to the use its of recycle water at the site for cooling and landscaping purposes. However, at this time the City does not provide recycled water to the site. The nearest recycled water main trunk line is located at the intersection of Camino Arroyo and Holloway Road, approximately 1 mile south of the project site. The City would likely extend the

water main trunk line north along Camino Arroyo to the intersection of Arroyo Circle and Camino Arroyo in the future and once extended recycled water would be used at the site. Final routing will be determined with by the City and Santa Clara Valley Water Authority in accordance with the Recycled Water Master Plan. However, please see Figure 3.3-1 for an exhibit of a potential recycled water main trunkline extension route.

3.3.2.8 *Electrical Power*

Electric Easements

Negotiations and commitments have been made with the property owner to the south of the property to secure an 80 foot overhead electrical easement along the southern boundary of Lot 2.

Figure 3.3-1: Potential Recycled Water Main

Interim Electricity Supply

The data center may begin operating prior to completion of the proposed electrical substation. To provide electricity to the data center during this interim period, the project has requested an interim service from PG&E capable of supporting 15 MW of electrical load. The 21kV feeders will be supplied from the PG&E's existing Llagas Substation located approximately 1.5 miles to the southwest of the site and travel through underground conduit to the site. Where possible the feeders will reuse existing utility substructures (e.g. vaults, pull boxes, and conduit).

Once on the GDC property, the feeder would continue underground to the Medium Voltage switchgear and transformers located in the northern portion of the site. The primary environmental impact will be boring to facilitate the underground feeder and digging to set vaults for utility MV equipment, pulling cables, and splicing cables together.

~~New~~ PG&E ~~Substation~~ Permanent Service Options

As part of the Phase I construction, ADS would either construct a new substation capable of supplying electricity to the full buildout or will be served by a single transmission line feed from the nearby Llaga Substation.

The substation option will encompass approximately 4 acres on the western boundary of the site. The substation switch yard will ultimately be owned and operated by PG&E. ADS will own and operate the Transformer yard. The substation components will include cabling, transformers, and circuit breakers. The substation will be fenced per PG&E standard.

Interconnection of the new substation to the distribution grid would require PG&E to install approximately 3 new electric transmission poles and approximately 1,000 linear feet of new overhead 115kV transmission line. The incoming transmission power lines will originate from PG&E's existing 115kV Morgan Hill-Llagas line located near the site at pole 019/121 and will enter the site along a pre-negotiated easement with the adjacent property owner.

The single feed option would need 11 new electric transmission poles and 3,600 linear feet of new overhead 115kV transmission line from the existing Llagas Substation.

3.3.2.9 *Workforce*

Construction

While a contractor has not yet been selected for demolition and construction activities, the average construction workforce is estimated to be 75 with a peak estimated to be 110 for each phase. Since the GDC will be constructed in phases, laydown areas are anticipated to be on-site.

Operation

The proposed data storage center operations will have three employee shifts which will be scheduled to begin and end during off-peak hours. After buildout there will be up to 50 full time employees. In addition to employees, based on the types of project necessary to maintain the facility, there could be up to a maximum of 74 contractors on site occasionally to complete special projects.

3.4 MITIGATION INCORPORATED INTO THE PROJECT DESIGN

3.4.1 Agriculture and Forestry Resources

PD AG-1: Consistent with the City of Gilroy's Agricultural Mitigation Policy, the project shall implement the following measures:

1) The project shall preserve farmland through one of the two options below. The options shall include all costs to cover program administration, monitoring and management of established easements as outlined in Section 1.02 (E) of the Agricultural Mitigation Policy:

   a) Option 1: Purchase an equal amount of land (1:1 ratio) of agricultural land within the "Preferred Preservation Areas" (as defined in the Agricultural Mitigation Policy) and the transfer of the ownership of this land to the Silicon Valley Land Conservancy or other City-approved agency.

   b) Option 2: Purchase of development rights to a 1:1 ratio on agricultural land within the "Preferred Preservation Areas" and the transfer of ownership of these rights to the Silicon Valley Land Conservancy or other City-approved agency.

2) At the time of any initial land use application approval, the applicant shall enter into a deferred payment or dedication agreement establishing the specific criteria and timing for implementing any required mitigation. This deferred agreement shall be recorded with the County Recorder's Office against the proposed project property. All required mitigation must be completed prior to final map approval, or if no map is required, no later than issuance of the first building permit.

3) Lands deemed acceptable for preservation are:

   a) Those lands designated as "Prime" or of "Statewide Importance" by the State Department of Conservation in the Preferred Areas; and

   b) Has an adequate water supply to support the historic agricultural use on the land. The water supply for the land shall be protected in the farmland conservation easement, the farmland deed restriction or other document evidencing the agricultural mitigation.

4) Programs with those City-approved agencies handling conservation easements in the "Preferred Preservation Areas" shall include the financial responsibility by the developers for program administration, outreach to landowners, monitoring, and management of established easements. An additional nominal fee to cover these items, the amount of which shall be established by the Silicon Valley Land Conservancy or other City-approved agency in concert with the City, shall be required in addition to the mitigation options outlined above.

5) The project shall include Right to Farm deed restrictions as follows:

   a) All lands located within one thousand (1,000) feet of any agricultural lands deemed for preservation, as shown on the City's Farmland Preservation Area map, shall be subject to the placement of a "right to farm" deed restriction that conforms with both Santa Clara County

restrictions as well as the State of California real estate transfer disclosure requirements as a condition of approval for any discretionary permit.

b) The deed restriction shall include the following wording: "You are hereby notified that the property you are purchasing is located within 1,000 feet of agricultural land, agricultural operations or agricultural processing facilities. You may be subject to inconvenience or discomfort from lawful agricultural operations. Discomfort and inconvenience may include, but are not limited to, noise, odors, fumes, dust, smoke, burning, vibrations, insects, rodents, and/or the operation of machinery (including aircraft) during any 24-hour period. One or more of the inconveniences described may occur as a result of agricultural operations, which are in compliance with existing laws and regulations and accepted customs and standards. If you live near an agricultural area, you should be prepared to accept such inconveniences or discomfort as a normal and necessary aspect of living in an area with a strong rural character and an active agricultural sector. Lawful ground rig or aerial application of pesticides, herbicides and fertilizers occur in farming operations. Should you be concerned about spraying, you may contact the Santa Clara County Agricultural Commission."

c) The Right to Farm Deed Restriction shall be included in all subsequent deeds and leases for this property and shall conform with both Santa Clara County restrictions as well as the State of California real estate transfer disclosure as defined by this policy.

6) The project shall include agricultural buffers as follows:

a) To minimize future potential conflicts between agricultural and non-agricultural land uses, all new developments adjacent to designated agricultural, agricultural preserve, agricultural open space, greenbelt/agricultural buffer areas shall be required to provide an agricultural buffer/agricultural transition area.

b) The agricultural buffer/agricultural transition area shall be a minimum of one hundred fifty (150) feet measured from the edge of the agricultural, agricultural preserve, greenbelt area. No public access shall be allowed in this transition area due to the potential for complaints about and exposure to the dust and spraying associated with agricultural activities.

c) This agricultural buffer/agricultural transition area shall be comprised of two components:

i) A one hundred (100) foot minimum wide agricultural buffer zone located adjacent to the agricultural lands or greenbelt area. The following uses in the one hundred (100) foot or greater agricultural buffer area shall be limited to:
   (a) Native plants, trees or hedge rows
   (b) Drainage channels, storm retention ponds, natural areas such as creeks or drainage swales
   (c) Railroad tracks or other utility corridors

ii) A fifty (50) foot agricultural transition area located between the one hundred (100) foot minimum agricultural buffer area and any new development. The following uses are allowed in the fifty (50) foot agricultural transition area:
   (a) Native plants, trees or hedge rows

(b) Drainage channels, storm retention ponds natural areas such as creeks or drainage swales
(c) Bike paths, benches, lighting, trash enclosures and fencing
(d) Other non-residential uses determined by the Planning Commission to be consistent with the use of the property as an agricultural buffer; such as natural trails, bike paths, wildlife habitats, wildlife sanctuaries, or community service facilities like detention basins.

The agricultural buffer/transition area shall be constructed by the developer of any land adjacent to agricultural uses, subject to approved plans by the Community Development Department. This area shall be maintained by the developer according to standards approved by the City until the area is dedicated to and accepted by the City or other City approved agency at which time they shall be responsible for maintenance.

3.4.2 Air Quality

PD AIR-1: The project will implement the following measures during construction.

Basic Measures:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

Exhaust Control Measures:

The following measures shall be implemented such that the off-road equipment to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) shall meet the emissions values as summarized in Table 4.3-6 (in Section 4.3 Air Quality). Acceptable methods for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels,

engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available.

- The following construction equipment used at the site during Phase I and Phase II construction shall be electric:
    - Pressure washer
    - Welder
- The following construction equipment used at the site during Phase I and Phase II shall meet U.S. EPA emission standards for Tier 3 engines and include particulate matter emissions control equivalent to CARB Level 2 verifiable diesel emission control devices that altogether achieve a 85 percent reduction in particulate matter exhaust:
    - Air compressors
    - Concrete/individual saws
    - Forklifts
    - Generator sets
    - Other construction equipment, such as concrete vibrators
    - Pavers
    - Pumps
    - Rollers
    - Sweepers/scrubbers
    - Tractors/loaders/backhoes
- The following construction equipment used at the site during Phase I shall meet U.S. EPA Tier 4 final emission standards according to one of the following options:
    - Option 1: Cranes, graders, rubber tired dozers, tractors/loaders/backhoes
    - Option 2: Cranes, graders, rubber tired dozers, bore/drill rigs
    - Option 3: Cranes, graders, rubber tired dozers, excavators
- The following construction equipment used at the site during Phase II shall meet U.S. EPA Tier 4 final emissions standards:
    - Cranes
    - Scrapers

PD AIR-2: The project shall limit generator maintenance and testing such that generator maintenance and testing operation does not occur during the same hour as the Phase II building exterior construction equipment.

PD AIR-3: The project shall not conduct maintenance and testing for the listed engines during the following hours and loads to comply with the 1-hour NO_2 NAAQS:

- GEN49 – No routine maintenance and testing at 100% load from 6:00 PM – 7:00 PM.
- GEN50 – No routine maintenance and testing at 100% load from 5:00 PM – 6:00 PM.
- SEC1 (Security Generator) – No routine maintenance and testing from 5:00 PM – 7:00 AM. Although the NO_x emissions exceed BAAQMD CEQA thresholds of significance, the concentration of NO_x resulting from the project would not exceed the CAAQS or NAAQS with implementation of Project Design Measures PD AIR-1.1 and PD AIR-1.2. The ambient air quality dispersion model resulted in PM_{10} exceeding the CAAQS, however this was due to background concentration data rather than pollutant concentrations resulting from the project.

Furthermore, although PM_{10} exceeded the CAAQS due to high background pollutant concentrations, project emissions of PM_{10} were below applicable SILs. Therefore, the project would not conflict with or have any adverse impact on implementation of the 2017 Bay Area Clean Air Plan nor would the project disrupt, or hinder implantation of any plan control measures with mitigation incorporated.

3.4.3 Biological Resources

PD BIO-1: The project would incorporate the following measures to reduce impacts to nesting birds.

- If removal of the trees on-site would take place between January and September, a pre-construction survey for nesting raptors will be conducted by a qualified ornithologist to identify active nesting raptor nests that may be disturbed during project implementation. Between January and April (inclusive) pre-construction surveys will be conducted no more than 14 days prior to the initiation of construction activities or tree relocation or removal. Between May and August (inclusive), pre-construction surveys will be conducted no more than thirty (30) days prior to the initiation of these activities. The surveying ornithologist shall inspect all trees in and immediately adjacent to the construction area to be disturbed by these activities, and the ornithologist shall, in consultation with the State of California, Department of Fish and Wildlife (CDFW), designate a construction-free buffer zone (typically 250 feet) around the nest until the end of the nesting activity.

- The applicant shall submit a report indicating the result of the survey and any designated buffer zones to the satisfaction of the Director of Community Development prior to the issuance of a tree removal permit by the City Arborist.

PD BIO-2: The project is subject to applicable Habitat Plan conditions and fees (including the nitrogen deposition fee) prior to issuance of any grading permits. The project applicant shall submit the Santa Clara Valley Habitat Plan Coverage Screening Form and Application for Private Projects to City of Gilroy Planning Division for approval and shall pay all applicable fees prior to the issuance of a grading permit. Applicable conditions shall be implemented in accordance with Habitat Plan requirements.

3.4.4 Cultural Resources

PD CUL-1: The following project-specific measures would be implemented during construction to avoid significant impacts to unknown subsurface cultural resources:

- A Secretary of the Interior-qualified archaeologist and a Native American cultural resources monitor shall be on site to monitor grading of native soil. The project applicant shall submit the name and qualifications of the selected archaeologist and Native American Monitor to the Director of Community Development prior to the issuance of a grading permit. Preference in selecting Native American monitors shall be given to Native Americans with:

    - Traditional ties to the area being monitored.
    - Knowledge of local historic and prehistoric Native American village sites.
    - Knowledge and understanding of Health and Safety Code, Section 7050.5 and Public Resources Code, Section 5097.9 et seq.

- Ability to effectively communicate the requirements of Health and Safety Code, Section 7050.5 and Public Resources Code, Section 5097.9 et seq.
- Ability to work with law enforcement officials and the Native American Heritage Commission to ensure the return of all associated grave goods taken from a Native American grave during excavation.
- Ability to travel to project sites within traditional tribal territory.
- Knowledge and understanding of Title 14, California Code of Regulations, Section 15064.5.
- Ability to advocate for the preservation in place of Native American cultural features through knowledge and understanding CEQA mitigation provisions.
- Ability to read a topographical map and be able to locate site and reburial locations for future inclusions in the Native American Heritage Commission's Sacred Lands Inventory.
- Knowledge and understanding of archaeological practices, including the phases of archaeological investigation.

Prior to grading, the archaeologist shall conduct a pedestrian survey over the exposed soils to determine if any surface archaeological manifestations are present.

- A qualified archaeologist shall complete mechanical presence/absence testing for archaeological deposits and cultural materials. In the event any prehistoric site indicators are discovered, additional backhoe testing will be conducted to map the aerial extent and depth below the surface of the deposits. In the event prehistoric or historic archaeological deposits are found during presence/absence testing, the significance of the find will be determined. If deemed significant, a Treatment Plan will be prepared and provided to the Director of Community Development. The key elements of a Treatment Plan shall include the following:

    - Identify scope of work and range of subsurface effects (include location map and development plan),

    - Describe the environmental setting (past and present) and the historic/prehistoric background of the parcel (potential range of what might be found),

    - Develop research questions and goals to be addressed by the investigation (what is significant vs. what is redundant information),

    - Detail field strategy used to record, recover, or avoid the finds (photogs, drawings, written records, provenience data maps, soil profiles, excavation techniques, standard archaeological methods) and address research goals.

    - Analytical methods (radiocarbon dating, obsidian studies, bone studies, historic artifacts studies [list categories and methods], packaging methods for artifacts, etc.).

    - Report structure, including a technical and layman's report and an outline of document contents in one year of completion of development (provide a draft for review before a final report),

    - Disposition of the artifacts,

    - Appendices: site records, update site records, correspondence, consultation with Native Americans, etc.]

The archaeologist will monitor full-time all grading and ground disturbing activities in native soils associated with construction of the proposed project. If the archaeologist and Native American monitor believe that a reduction in monitoring activities is prudent, then a letter report detailing the rationale for making such a reduction and summarizing the monitoring results shall be provided to the Director of Community Development. Department of Recreation 523 forms shall be submitted along with the report for any cultural resources encountered over 50 years old.

- In the event that prehistoric or historic resources are encountered during on-site construction activities, all activity within a 50-foot radius of the find shall be stopped, the Director of Community Development shall be notified, and a Secretary of the Interior-qualified archaeologist shall examine the find and record the site, including field notes, measurements, and photography for a Department of Parks and Recreation 523 Primary Record form. The archaeologist shall make a recommendation regarding eligibility for the California Register of Historical Resources, data recovery, curation, or other appropriate mitigation. Ground disturbance within the 50-foot radius can resume once these steps are taken and the Director of Community Development has concurred with the recommendations. Within 30 days of the completion of construction or cultural resources monitoring, whichever comes first, a report of findings documenting any cultural resource finds, recommendations, data recovery efforts, and other pertinent information gleaned during cultural resources monitoring shall then be submitted to the Director of Community Development. Once finalized, this report shall be submitted to the Northwest Information Center at Sonoma State University.

- Prior to and for the duration of ground disturbance, the project owner shall provide Worker Environmental Awareness Program training to all existing and any new employees. This training should include: a discussion of applicable laws and penalties under the laws; samples or visual aids of artifacts that could be encountered in the project vicinity, including what those artifacts may look like partially buried, or wholly buried and freshly exposed; and instructions to halt work in the vicinity of any potential cultural resources discovery, and notify the city-approved archaeologist and Native American cultural resources monitor.

PD CUL-2: The project proposes to implement the following measure to ensure the project's impacts to human remains are less than significant:

- In the event that human remains are discovered during presence/absence testing or excavation and/or grading of the site, all activity within a 50-foot radius of the find will be stopped. The Santa Clara County Coroner will be notified and shall make a determination as to whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the Coroner will notify the Native American Heritage Commission (NAHC) immediately. Once NAHC identifies the most likely descendants, the descendants will make recommendations regarding proper burial, which will be implemented in accordance with Section 15064.5(e) of the CEQA Guidelines. All actions taken under this mitigation measure shall comply with Health and Human Safety Code § 7050.5(b).

3.4.5 Geology and Soils

PD GEO-1: In order to ensure the project design conforms to the requirements of a final geotechnical engineering investigation and California and local building standards and codes, the following is proposed as mitigation incorporated into the project. Incorporation will ensure seismic hazards are reduced to less than significant levels.

- To avoid or minimize potential damage from seismic shaking, the project would be built using standard engineering and seismic safety design techniques. Building redevelopment design and construction at the site shall be completed in conformance with the recommendations of a design-level geotechnical investigation, which will be included in a report to the City. The report shall be reviewed and approved by the City of Gilroy's Building & Safety Division as part of the building permit review and issuance process. The building shall meet the requirements of applicable Building and Fire Codes, including the 2016 California Building Code, as adopted or updated by the City. The project shall be designed to withstand potential geologic hazards identified on the site and the project shall be designed to reduce the risk to life or property to the extent feasible and in compliance with the Building Code.

PD GEO-2: The project proposes to implement the following measures as best management practices to ensure impacts to paleontological resources are less than significant.

a) Prior to the start of any subsurface excavations that would extend beyond previously disturbed soils, all construction forepersons and field supervisors shall receive training by a qualified professional paleontologist, as defined by the Society of Vertebrate Paleontology, who is experienced in teaching non- specialists, to ensure they can recognize fossil materials and shall follow proper notification procedures in the event any are uncovered during construction. Procedures to be conveyed to workers include halting construction within 50 feet of any potential fossil find and notifying a qualified paleontologist, who shall evaluate its significance.

b) If a fossil is found and determined by the qualified paleontologist to be significant and avoidance is not feasible, the paleontologist shall develop and implement an excavation and salvage plan in accordance with Society of Vertebrate Paleontology standards. Construction work in these areas shall be halted or diverted to allow recovery of fossil remains in a timely manner. Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and cataloged. Prepared fossils, along with copies of all pertinent field notes, photos, and maps, shall then be deposited in a scientific institution with paleontological collections. A final Paleontological Mitigation Plan Report shall be prepared that outlines the results of the mitigation program. The Director of Planning and Inspection shall be responsible for ensuring that the paleontologist's recommendations regarding treatment and reporting are implemented.

3.4.6 Hazards and Hazardous Materials

PD HAZ-1: The project proposes to implement the following measures which would reduce potentially significant soil and or groundwater impacts to construction workers to a less than significant level.

- A Site Management Plan (SMP) would be prepared to establish management practices for handling impacted groundwater and/or soil material that may be encountered during site development and soil-disturbing activities. Components of the SMP would include:
    - a detailed discussion of the site background;
    - preparation of a Health and Safety Plan by an industrial hygienist;
    - protocols for conducting earthwork activities in areas where impacted soil and/or groundwater are present or suspected;
    - worker training requirements, health and safety measures and soil handing procedures shall be described;
    - protocols shall be prepared to characterize/profile soil suspected of being contaminated so that appropriate mitigation, disposal or reuse alternatives, if necessary, can be implemented;
    - notification procedures if previously undiscovered significantly impacted soil or groundwater is encountered during construction;
    - notification procedures if previously unidentified hazardous materials, hazardous waste, underground storage tanks are encountered during construction;
    - on-site soil reuse guidelines;
    - 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.

- Prior to issuance of grading permits, a copy of the SMP must be approved by the Santa Clara County Environmental Health Department, and the City of Gilroy Planning Division.

- If contaminated soils are found in concentrations above risk-based thresholds pursuant to the terms of the SMP, remedial actions and/or mitigation measures would be taken to reduce concentrations of contaminants to levels deemed appropriate by the selected regulatory oversight agency for ongoing site uses. Any contaminated soils found in concentrations above thresholds to be determined in coordination with regulatory agencies shall be either (1) managed or treated in place, if deemed appropriate by the oversight agency or (2) removed and disposed of at an appropriate disposal facility according to California Hazardous Waste Regulations and applicable local, state, and federal laws.

3.4.7 Hydrology and Water Quality

PD HYD-1: Prior to issuance of a grading permit, a Conditional Letter of Map Revision-Fill (CLOMR-F) study shall be completed and submitted to FEMA for review and approval. After completing site grading or construction in the floodplain, a final LOMR-F study shall be completed and submitted to FEMA for review and approval to reflect the as-built conditions on the Flood Insurance Rate Map (FIRM).

3.4.8 Noise

PD NOI-1: The project shall incorporate the following measures to reduce the noise impact associated with the use of pile drivers:

- A barrier shall be included for the duration of pile driving activities with the following specifications for Phase I construction, or alternatively utilize auger cast piles instead of driven piles.
    - Barrier 1: 330 feet in length, 10 feet tall
    - Barrier 2: 165 feet in length, 10 feet tall
    - Barriers shall be placed in the locations specified by Trinity Consultants in Figure 4.7 of Appendix J.
- A barrier shall be included for the duration of pile driving activities with the following specifications for Phase II construction, or alternatively utilize auger cast piles instead of driven piles.
    - Barrier 3: 560 feet in length, 13 feet tall
    - Barrier 3 shall be placed in the location specified by Trinity Consultants in Figure 4.9 of Appendix J.

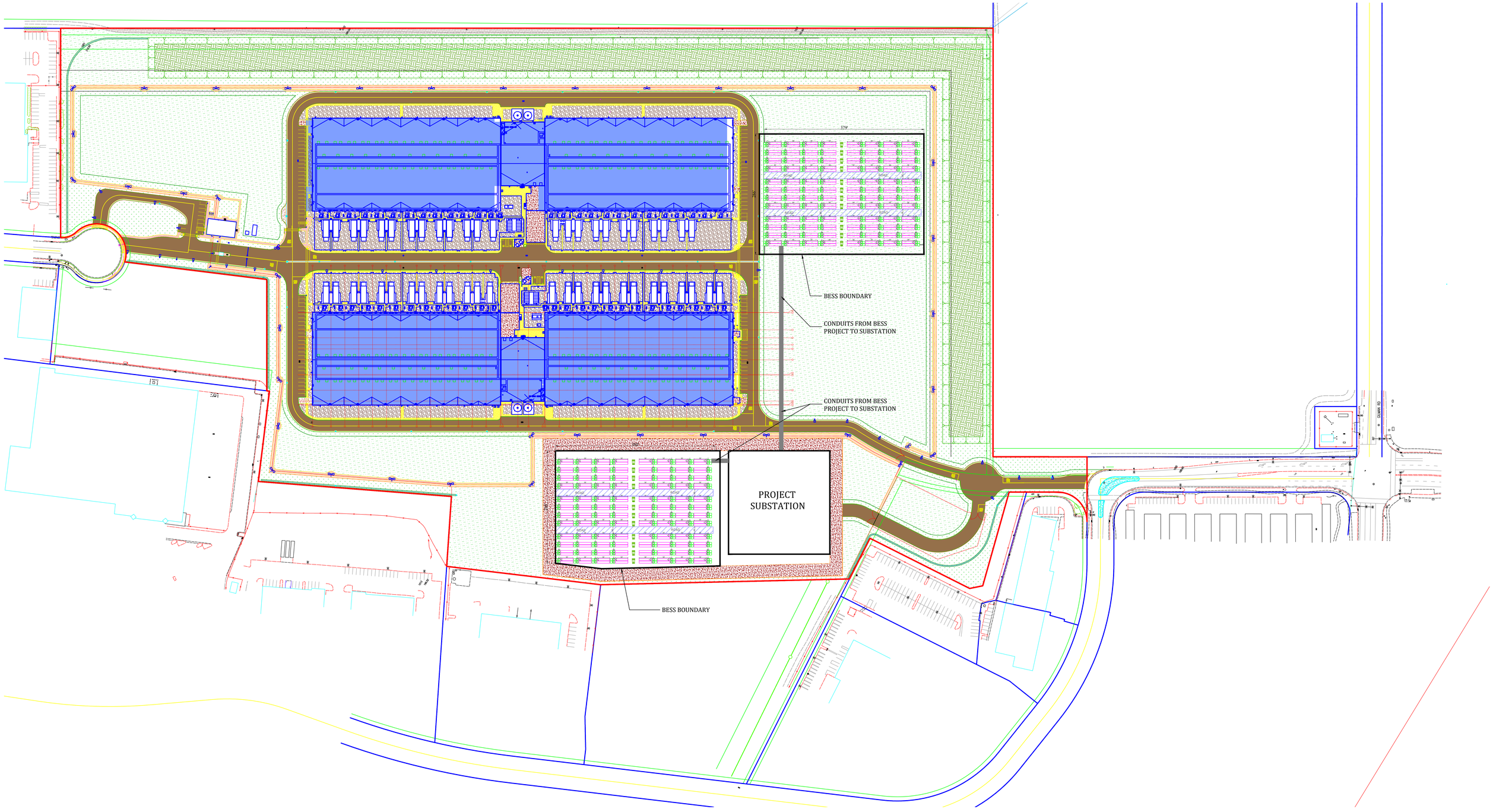
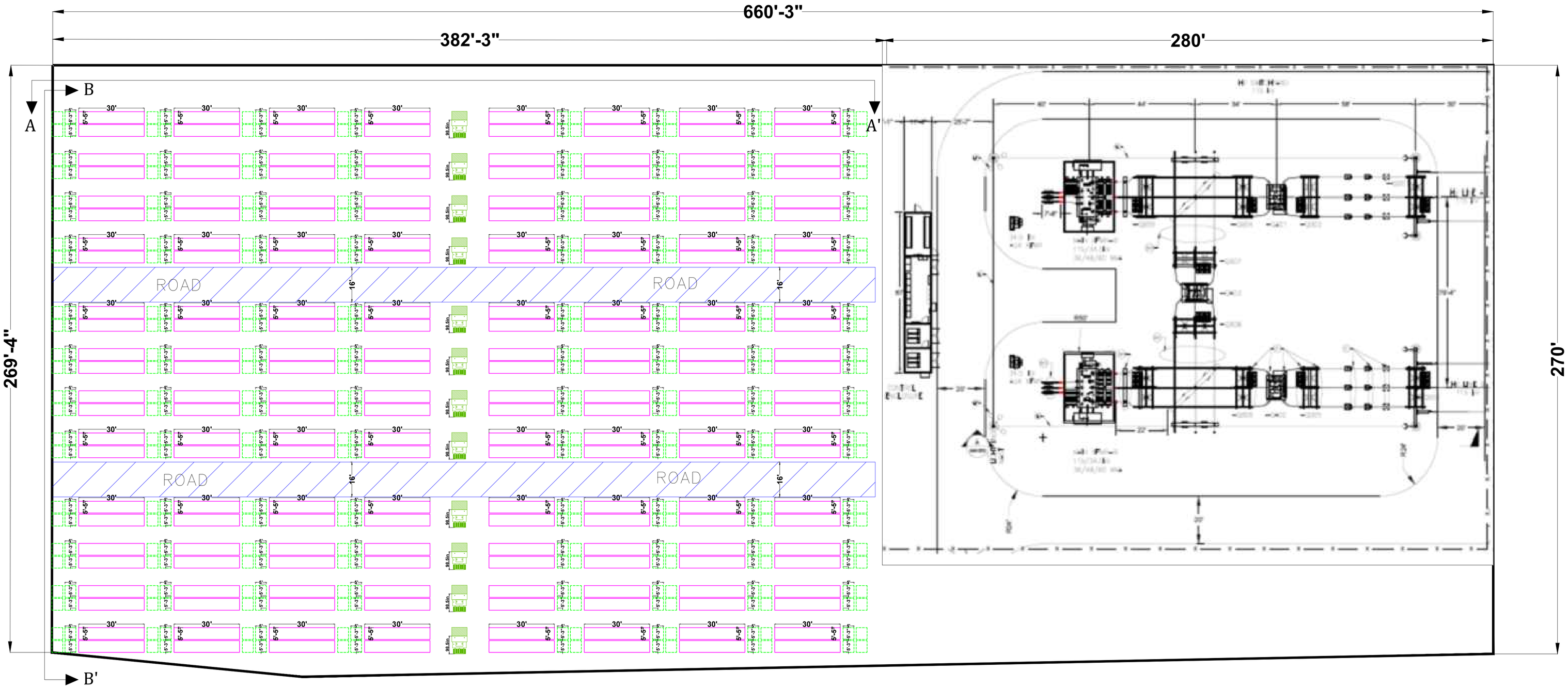
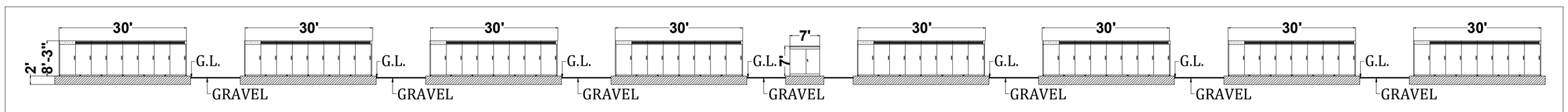
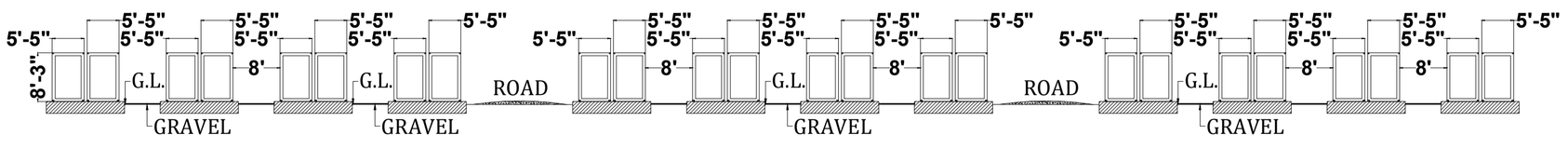


Figure 3.2-5 BESS Site Plan





VIEW OF DETAIL A-A'

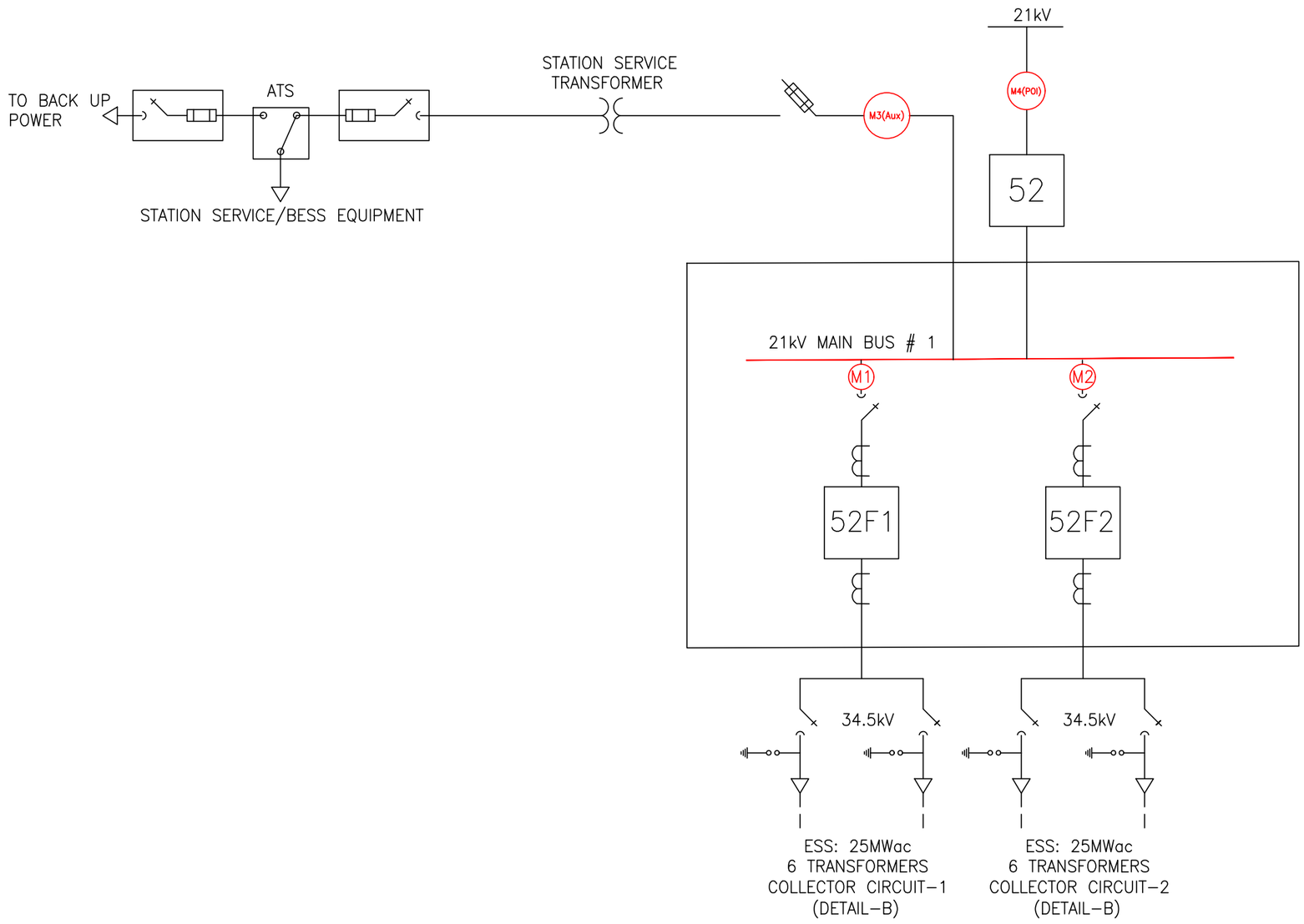


VIEW OF DETAIL B-B'

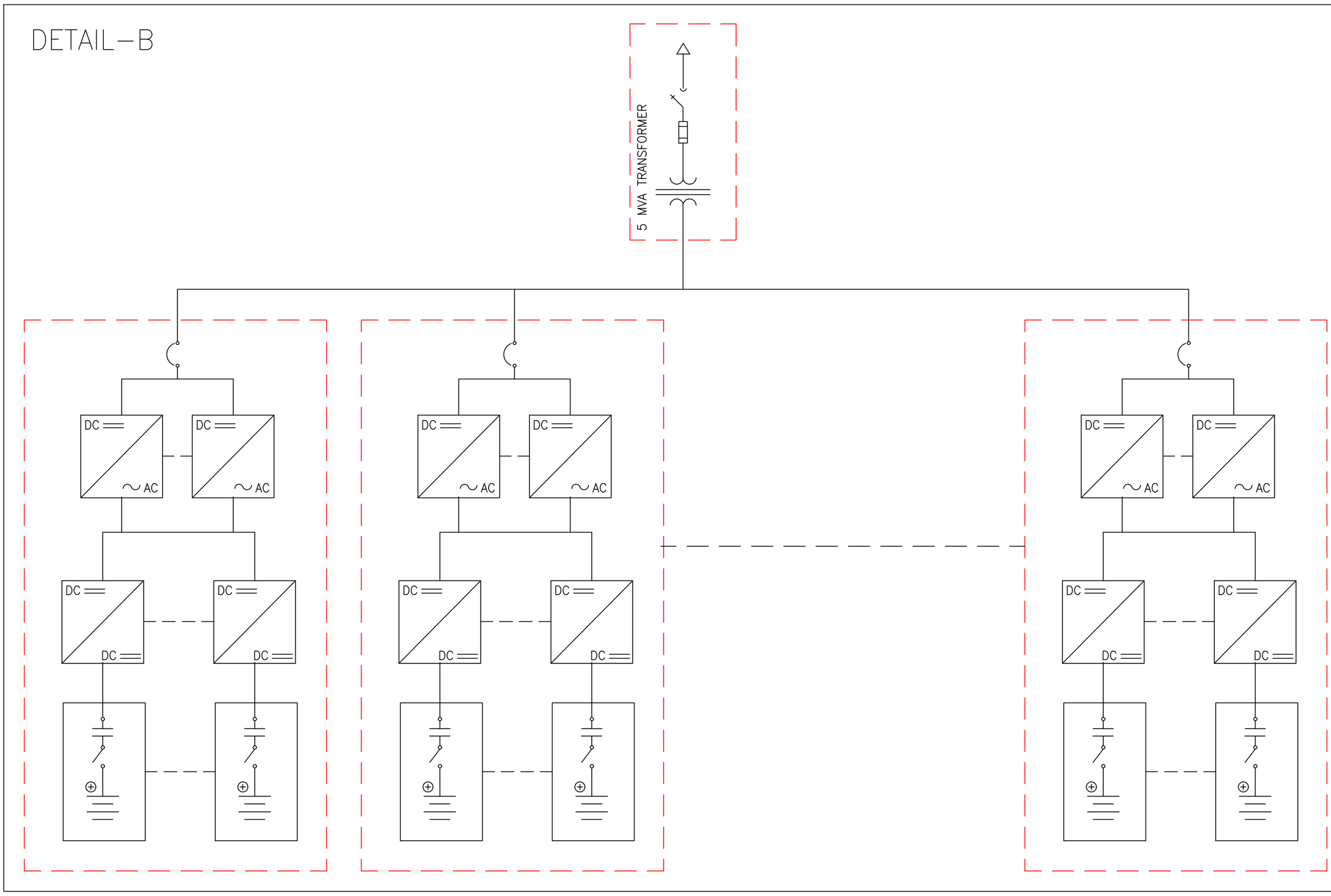
NOTES:-
1. ALL DIMENSIONS ARE FEET & INCHES
2. PLANT CAPACITY = 50MW/670MWh

		Gilroy Data Center			
		Preliminary BESS Layout Plan Phase I			
SCALE	NTS	Figure 3.2-6		.	

LEGENDS:-	
SYMBOL	DESCRIPTION
M1 ----- M2	METER FOR STORAGE
M3(Aux)	METER FOR AUXILIARY
M4(POI)	METER FOR POI



DETAIL-B



	Gilroy Data Center
	SINGLE LINE DIAGRAM (S) (50MW BLOCK)
SCALE NTS	Figure 3.2-7