STACK TRADE ZONE PARK

Draft Environmental Impact Report

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DRAFT ENVIRONMENTAL IMPACT REPORT

Stack Trade Zone Park

(21-SPPE-02)

Lead Agency

California Energy Commission

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Section 1

Summary

1 Summary

This environmental impact report (EIR) has been prepared by the California Energy Commission (CEC) to evaluate the potential environmental effects of the development of the Trade Zone Boulevard Technology Park (STACK Trade Zone Park or project), in compliance with the California Environmental Quality Act (CEQA), the CEQA Guidelines, the Warren-Alquist Act, and California Code of Regulations, Title 20 (Small Power Plant Exemptions).

STACK Trade Zone Park would include an advanced manufacturing building (AMB), the SVY Data Center (SVYDC), the SVY Backup Generating Facility (SVYBGF), a parking garage, and related utility infrastructure, which together constitute the "project" under CEQA. The generating facility would consist of 36 3-MW and 3 1-MW diesel-fired emergency backup generators (gensets) arranged in two generation yards, each designed to serve one of the two data center buildings. All the gensets would be dedicated to replacing the electricity needs (with redundancy) of the data center buildings in case of a loss of electrical power from Pacific Gas and Electric Company (PG&E). One of the 1 MW diesel-fired backup generators would be installed near the southwest corner of the AMB.

The CEC has the exclusive authority to certify all thermal power plants (50 megawatts [MW] and greater) and related facilities proposed for construction in California. The Small Power Plant Exemption (SPPE) process allows applicants with facilities not exceeding 100 MW to obtain an exemption from the CEC's jurisdiction and proceed with local permitting rather than requiring the CEC's certification. The CEC can grant an exemption if it finds that the proposed facility would not create a substantial adverse impact on the environment or energy resources. Public Resources Code section 25519(c) designates the CEC as the lead agency, in accordance with CEQA, for all facilities seeking an SPPE.

1.1 Project Summary

STACK Infrastructure (STACK or applicant) filed an application with the CEC seeking an exemption from the CEC's jurisdiction for the Trade Zone Park (21-SPPE-02). The STACK Trade Zone Park would be located on two parcels of land encompassing approximately 9.8 acres at the corner of Trade Zone Boulevard and Ringwood Avenue (2400 Ringwood Avenue and 1849 Fortune Drive) in the city of San José. STACK Trade Zone Park would include one four-story advanced manufacturing building (approximately 136,573 square feet), two four-story data center buildings (approximately 522,194 square feet), a parking garage, related utility infrastructure, and a 91 MW backup generating facility.

The 90 MW SVYBGF would support the need for the SVYDC to provide uninterruptible power supply for its tenant's servers. The SVYBGF would serve the SVYDC. The 36 3-MW and 3 1-MW diesel-fired backup generators would be arranged in two generation yards, each designed to serve one of the two data center buildings (SVYDC 05 and SVYDC 06) that make up the SVYDC and next to the AMB. All the generators would be dedicated to

replace the electricity needs of the data center buildings and the emergency power needs of the AMB (with redundancy) in case of a loss of utility power. The larger generators are designed to replace the electricity needed to serve the data halls, and all three of the smaller generators would be used to support redundant house critical cooling equipment and other general building and life safety services (house generators). Switchgear and distribution cabling would be included to interconnect the generators to their respective portions of the buildings.

The project would construct a new 100 MVA (mega volt-ampere) electrical substation along the eastern boundary of the site to be owned and operated by PG&E. To serve the project, PG&E would be constructing a "looped" transmission interconnection involving two offsite transmission lines. The first extension would involve a line from the west that comprises a single circuit 115 kilovolt (kV) OH (Overhead) transmission line (T-Line) from an existing PG&E Newark-Milpitas #2 115 kV Line which is located on the southwest side of Trade Zone Boulevard and Montague Expressway. The route would be approximately 0.25 mile and would be supported on existing OH transmission towers, located along the south side of Trade Zone Boulevard. It is possible that up to three or more of the existing seven OH transmission towers may need to be replaced. The second transmission line would be a single circuit 115 kV UG (underground) T-Line that would interconnect the existing PG&E Newark-Milpitas #2 115 kV Line which is located on the southeast side of the intersection of Trade Zone Boulevard and Montague Expressway. The route to the site for the second line would be approximately 0.25 mile and would be underground within the northern side of Trade Zone Boulevard right of way then cross from north to south to the site. **Figure 3-3** in **Section 3 Project Description**, shows the route of the overhead and underground transmission lines.

1.2 Summary of Environmental Impacts and Mitigation Measures

In accordance with section 25519(c) of the Public Resources Code and CEQA, CEC serves as the lead agency to review an SPPE application and perform any required environmental analyses. Upon granting of an exemption, the local permitting authorities—in this case the City of San José and Bay Area Air Quality Management District (BAAQMD)—would perform any follow-up CEQA analysis and impose mitigation, as necessary, for granting approval of the project.

Below is an overview of the analysis included in **Section 4 Environmental Setting, Environmental Impacts and Mitigation**. Impacts are categorized by the type of impact as follows:

1. No Impact. The scenario in which no adverse physical changes to (or impacts on) the environment would be expected.
2. Less Than Significant Impact. An impact that would not exceed the defined significance criteria or would be eliminated or reduced to a less than significant level through implementation of the applicant's project measures or compliance with existing federal, state, and local laws and regulations.

3. Less Than Significant with Mitigation Incorporated. An impact that would be reduced to a less than significant level through implementation of the identified mitigation measure(s).
4. Significant and Unavoidable Impact. An adverse effect that meets the significance criteria, but there appears to be no feasible mitigation available that would reduce the impact to a less than significant level. In some cases, mitigation may be available to lessen a given impact, but the residual effects of that impact would continue to be significant even after implementation of the mitigation measure(s).

Staff concludes that with the implementation of the mitigation measures presented below, the potentially significant impacts identified in this EIR would be avoided or reduced to less than significant levels. Staff concluded that impacts in the areas of Air Quality, Biological Resources, Cultural and Tribal Cultural Resources, Geology and Soils (paleontology), Greenhouse Gas Emissions, Hazards and Hazardous Materials, Noise, and Transportation would be potentially significant, but with mitigation measures would be reduced to less than significant. Aesthetics, Energy and Energy Resources, Hydrology and Water Quality, Land Use, Population and Housing, Public Services, Recreation, and Utilities and Service Systems would have less than significant impacts from the project. Agriculture and Forestry Resources, Mineral Resources, and Wildfire would have no impact from the project. The mitigation measures would be enforced by the appropriate responsible agency under CEQA, which includes the City of San José. The following summarizes the potential impacts and mitigation as required.

Air Quality. *Less Than Significant with Mitigation Incorporated*. The project would not conflict with or obstruct implementation of the applicable air quality plan. The project would not expose sensitive receptors to substantial pollutant concentrations. The project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. Air quality impacts during project construction would be reduced with implementation of mitigation measure **AQ-1**. This measure requires incorporation of the BAAQMD's best management practices to control fugitive dust. This measure also incorporates exhaust control measures to reduce emissions from construction equipment. During operation of the engines, the oxides of nitrogen (NOx [as an ozone precursor]) emissions of the standby generators would be fully offset through the permitting process with the BAAQMD. With implementation of these measures during construction and NOx offsets for operations through BAAQMD's permitting requirements, the project would not cause a cumulatively considerable net increase of any criteria pollutant, and impacts would be reduced to a less than significant level.

AQ-1: To incorporate the Bay Area Air Quality Management District (BAAQMD) recommendations for Best Management Practices to control fugitive dust, the project owner shall implement a fugitive dust control plan that has been reviewed and approved by the Director or Director's designee with the City of San José Department of Planning, Building, and Code Enforcement prior to the issuance of any grading or building permits,

whichever occurs earliest. The project owner shall implement the following measures during construction:

- Water all exposed areas (e.g. parking areas, graded areas, unpaved access roads) twice a day.
- Maintain a minimum soil moisture of 12% in exposed areas by maintaining proper watering frequency.
- Cover all haul trucks carrying sand, soil, or other loose material.
- Suspend excavation, grading, and/or demolition activities when average wind speed exceeds 20 miles per hour.
- Pave all roadways, driveways, and sidewalks as soon as possible. Lay building pads as soon as grading is completed, unless seeding or soil binders are used.
- Use a power vacuum to sweep and remove any mud or dirt-track next to public streets, if visible soil material is carried onto the streets.
- Limit vehicle speeds on unpaved roads to 15 miles per hour (mph).
- Minimize idling time for all engines by shutting engines when not in use or limiting idling time to a maximum of five minutes. Provide clear signage for construction workers at all access points.
- Properly tune and maintain construction equipment in accordance with manufacturer's specifications. Check all equipment against a certified visible emissions calculator.
- Post a publicly visible sign with the telephone number and name of the person to contact regarding dust complaints and the BAAQMD telephone number. The contact person shall implement corrective measures, as needed, within 48 hours, and the BAAQMD shall be informed of any legitimate complaints received to verify compliance with applicable regulations.
- Limit simultaneous occurrence of excavation, grading, and ground-disturbing construction activities.
- Minimize idling time of diesel-powered construction vehicles to two minutes.
- All contractors use equipment that meets CARB's most recent certification standard for off-road heavy-duty diesel engines.

Biological Resources. *Less Than Significant with Mitigation Incorporated*. The project would not adversely affect any species identified as candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or United States Fish and Wildlife Service (USFWS), with mitigation incorporated. Staff proposes **BIO-1** entailing development and use of a worker environmental awareness program (WEAP) to actively train on-site personnel in identifying and avoiding special-status species, specifically burrowing owl as well as nesting migratory birds. **BIO-2** includes measures to prevent and reduce impacts on burrowing owls to less-than-significant levels, including pre-construction surveys,

establishing buffer zones during the breeding and non-breeding season, monitoring, discouraging re-colonization, and passive relocation. **BIO-3** includes requirements to conduct tree removal outside the migratory bird nesting period if possible, to conduct nesting bird surveys prior to the initiation of any construction activities during the nesting period, to establish buffers to avoid the disturbance of nesting birds if active nests are detected, and to conduct monitoring of active bird nests. With implementation of **BIO-1**, **BIO-2** and **BIO-3**, impacts to burrowing owl and associated habitat and nesting migratory birds would be reduced to a less than significant level.

BIO-4 creates a detailed reporting structure for bird surveys, avian protection measures by compiling these reports and measures within an Avian Protection Plan. With implementation of **BIO-1** through **BIO-4** impacts to avian species would be reduced to a less than significant level.

Nitrogen deposition may adversely affect special status plants, and in turn, the wildlife dependent upon them. The proposed project contributes to nitrogen deposition through stationary (ie point source) and mobile (i.e. vehicle trips over current conditions as a "non-point" source) emissions. While staff considered both types of emissions, staff analysis showed that only mobile emissions would result in a significant impact. Implementation of **BIO-5**, requiring the applicant to pay a one-time nitrogen deposition fee payment pursuant to the Santa Clara Valley Habitat Plan would reduce the projects impacts from nitrogen deposition to a less than significant level.

The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local plans, policies, and regulations or by the CDFW or USFWS. The project would not adversely affect state or federally protected wetlands, (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. On-site adherence to discharge requirements for the control of solids and pollutants leaving the construction area, as required in the local National Pollution Discharge Elimination System (NPDES) authorization, as well as a Stormwater Pollution Prevention Plan (SWPPP) written to be consistent with the NPDES would ensure that impacts to natural waterways would be avoided. The applicant did not propose a mitigation measure for this requirement. However, the project applicant is required to comply with the measures of the local NPDES as well as develop and implement a project specific SWPPP. This would ensure impacts to any natural waterways during construction are less than significant.

The project would not interfere with the movement of any native resident or migratory fish or wildlife species or established wildlife corridors or impede the use of native wildlife nursery sites.

The project owner would be required to obtain a tree permit and in compliance with the City of San José (City) Municipal Code regarding tree removal and protection of the Heritage Trees. Furthermore, the project owner would be responsible for the well-being and successful growth of all the trees planted as replacement trees under the tree permit

granted by the city in accordance with Municipal Code section 13.32.110, part E. Therefore, impacts to trees would be less than significant.

Impacts arising from a conflict with the Santa Clara Valley Habitat Plan would be reduced to a less than significant level with the implementation of **BIO-2** and **BIO-5**.

BIO-1: Worker Environmental Awareness Program (WEAP)

A worker environmental awareness program (WEAP) biological resources module will be conducted for onsite construction personnel prior to the start of construction activities. The module will explain all the measures developed to prevent impacts on special-status species, including Western burrowing owl and golden eagle, and nesting birds. The module will also include a description of special-status species and their habitat needs, as well as an explanation of the status of these species and their protection under Endangered Species Act, California Endangered Species Act, and other statutes. A brochure will be provided with color photos of sensitive species, as well as a discussion of any permit measures. A copy of this WEAP program and brochure shall be provided for review and approval to Director or Director's designee with the City of San José Department of Planning, Building and Code Enforcement and the Santa Clara Valley Habitat Agency at least 30 days prior to the start of construction. This includes the following measures:

- Environmental Inspector: A qualified Environmental Inspector shall verify implementation and compliance with all mitigation measures. The Environmental Inspector shall have the authority to stop work or determine alternative work practices where safe to do so, as appropriate, if construction activities are likely to affect sensitive biological resources.
- Litter and Trash Management: Food scraps, wrappers, food containers, cans, bottles, and other trash from the project area shall be deposited into closed trash containers. Trash containers shall be removed from the project work areas at the end of each working day unless located in an existing substation, potential staging area, or the switching station site.
- Parking: Vehicles and equipment shall be parked on pavement, existing roads, and previously disturbed or developed areas, or work areas as identified in this document.
- Work Areas, Staging Areas: Work, staging, vehicle parking, and equipment parking areas shall be contained within the final areas that are negotiated with the relevant property owners, or as noted above.
- Pets and Firearms: No pets or firearms shall be permitted at the project site

BIO-2: Burrowing Owl Surveys, Monitoring, Prevention and Relocation

Part A: The project applicant shall conduct preconstruction surveys to ascertain whether burrowing owls occupy burrows on the site and along the utility alignments offsite prior to construction. The preconstruction surveys shall be performed by a qualified biologist and shall consist of a minimum of two surveys, with the first survey no more than 14

days prior to initial construction activities (i.e. vegetation removal, grading, excavation, etc.) and the second survey conducted no more than 2 days prior to initial construction activities. If no burrowing owls or fresh sign of burrowing owls are observed during preconstruction surveys, construction may continue. However, if a burrowing owl is observed during these surveys, occupied burrows shall be identified by the monitoring biologist and a buffer shall be established, as follows:

- If an active nest is found, a qualified biologist shall study nesting behavior and shall establish at a minimum a 250-foot non-disturbance buffer around all nest sites, based on stress response of the birds and the 2012 Staff Report (CDFW 2012). If the biologist determines that the nest is vacant, the non-disturbance buffer zone may be removed, in accordance with measures described in the SCVHP. The biologist shall supervise hand excavation of the burrow to prevent reoccupation only after receiving approval from the wildlife agencies (CDFW and USFWS) in accordance with Chapter 6, Condition 15 of the SCVHP.
- For permission to encroach within the nest buffer, (February 1st through August 31st), an Avoidance, Minimization, and Monitoring Plan shall be prepared and approved by the City and the wildlife agencies prior to such encroachment in accordance with Chapter 6 of the SCVHP.

An Avoidance, Minimization, and Monitoring Plan shall be prepared, provided to the agencies, and approved by the City Director of Planning, Building and Code Enforcement or their designee and the wildlife agencies prior to nest encroachment in accordance with Chapter 6 of the SCVHP.

Part B: Should a burrowing owl be located during the non-breeding season (September through January), a 250-foot buffer shall be established, and construction activities shall not be allowed within the 250-foot buffer of the active burrow(s) used by any burrowing owl unless the following avoidance measures are adhered to:

- A qualified biologist shall monitor the owls for at least 3 days prior to construction to determine baseline foraging behavior (i.e., behavior without construction).
- The same qualified biologist shall monitor the owls during construction. If the biologist determines there is a change in owl nesting and foraging behavior as a result of construction activities, these activities shall cease within the 250-foot buffer.
- If the owls are gone from the burrows for at least 1 week, the project applicant may request approval from the habitat agency to excavate all usable burrows within the proposed project area to prevent owls from reoccupying the site. After all usable burrows are excavated, the buffer zone shall be removed, and construction may continue.

The project owner shall request approval from the Santa Clara Valley Habitat agency to excavate usable, unoccupied burrows within the project site during the non-breeding season.

Part C: In the event the voluntary relocation of site burrowing owls does not occur (defined as owls having vacated the site for 10 or more consecutive days), the project applicant can request permission to engage in passive relocation during the non-breeding season through the standard SCVHP application process (Section 6.8 of the SCVHP). If passive relocation is granted, additional measures may be required by the Habitat Agency.

- If the owls voluntarily vacate the site for 10 or more consecutive days, as documented by a qualified biologist, the project applicant could seek permission from the Santa Clara Valley Habitat Agency to have the qualified biologist take measures to collapse vacated and other suitable burrows to confirm that owls do not recolonize the site, in accordance with the SCVHP, by preparing a written request and submitting supporting documentation to the City Director or their designee.

BIO-3: Nesting Bird Avoidance and Minimization Measures

The project applicant shall schedule demolition and construction activities, **if at all feasible**, to avoid the nesting season. The nesting season for most birds, including most raptors in the San Francisco Bay area, extends from February 1st through August 31st (inclusive).

If any construction or demolition activities, including tree or vegetation removal or ground disturbance, occurs during the nesting season (February 1 through August 31), the project applicant shall adhere to the following guidelines:

- The project applicant shall submit the resume of an ornithologist or other qualified biologist (with at least a bachelor's degree in a biological science field and demonstrated field expertise in avian species) for approval by the City of San José.
- The pre-approved ornithologist or other qualified biologist (Designated Biologist, DB) shall conduct at least two pre-construction nest survey(s). The two pre-construction surveys shall be separated by a minimum 11-day interval and conducted no more than 14 days prior to initiation of any construction activity. One survey shall be conducted within the 3-day period preceding initiation of construction activity. Additional follow-up surveys may be required if periods of construction inactivity exceed two weeks in any given area, an interval during which birds may establish a nesting territory and initiate egg laying and incubation.
- Surveys shall cover all potential nesting habitat and substrate within the project site and any offsite facilities (i.e., electrical transmission line, staging area, employee parking) and publicly accessible areas within 500 feet of the project boundary. Any habitat areas adjacent to the project site but not publicly accessible shall be surveyed with binoculars. These surveys shall include the orders Falconiformes and Strigiformes (raptors and owls). Surveys shall be conducted at appropriate nesting times and concentrate on potential roosting or perch sites.
- If active nests are detected during on-site surveys, a no-disturbance buffer zone (protected area surrounding the nest) shall be established around each nest with fencing, flagging and/or signage, as appropriate. Initially each nest will have the

following buffer zone: 150 feet for any migratory bird nests, 250 feet for any raptor and owl nests (including burrowing owl), and 500 feet for any special status species. Ultimately, the size of each buffer zone shall be determined by the Designated Biologist in consultation with the California Department of Fish and Wildlife (CDFW) and the Santa Clara Valley Habitat Agency. Collaboration to determine the appropriate buffer size for each nest found should be based upon the species, topography, behavior of the nesting birds, and type of activity that would occur in the vicinity of the nest. Once the buffer zone is established, other than the DB adjusting the buffer zone, it shall remain undisturbed and no construction activities, as defined above, shall occur within the buffer zone the DB and City of San José verifies that the nest(s) are no longer active.

- If active nests are detected during the surveys, the DB shall monitor the nest weekly (at least once a week for special status species) until the DB determines that nestlings have fledged and dispersed, or the nest is no longer active. This applies to both onsite and offsite nests. If signs of disturbance or distress are observed, the DB shall immediately implement adaptive measures to reduce disturbance. These measures may include, but are not limited to, increasing buffer size, halting disruptive construction activities in the vicinity of the nest until fledging is confirmed, or placement of visual screens or sound-dampening structures between the nest and construction activity, where possible. The DB shall have sole authority not only to order the cessation of nearby project activities, but also when to resume project activities based upon the observed behavior of the nesting pairs and whether the nesting pairs continue to exhibit signs of distress.
- If active nests of special-status species are detected during pre-construction surveys or during project construction, the Director or their designee for the City of San José's Department of Planning, Building and Code Enforcement shall be notified within 24 hours. A letter through email may be used initially and shall state how impacts of any nesting birds will be avoided by citing the appropriate information from this mitigation measure. The final notification shall include all the reporting elements as described below. This guideline shall also apply to any new nests discovered during project construction. All other guidelines above shall be followed.

BIO-4: Avian Reporting and Avian Protection Plan

The designated biologist shall be responsible for preparing the pre-construction nest survey reports (including the burrowing owl survey report per **BIO-2**). The report(s) shall include the time, date, methods, and duration of the surveys; identity and qualifications of the surveyor(s); and a list of species observed. If active nests are detected during the surveys, the reports shall also include a map made using GPS technology or aerial photo identifying the location of the nest(s), species, and a depiction of the boundary of the no-disturbance buffer zone around the nest(s). As new nests are discovered during construction, or buffer zones are adjusted, this map of bird nests should be updated. Inactive nests should be indicated by color in order to more visually comprehend where active nests are located.

A compilation shall be made of the pre-construction nest survey reports, including a summary of all the guidelines contained in **BIO-2** and **BIO-3**. This compilation, known as the Avian Protection Plan, shall be submitted to the Director or their designee for the City of San José's Department of Planning, Building and Code Enforcement prior to any construction activities for review and approval.

BIO-5: Non-Point Source Nitrogen Deposition Fee

Pursuant to the 2012 Santa Clara Valley Habitat Plan (SCVHP) (Chapter 6 and Section 9, Table 9-7b), prior to any ground disturbance, a one-time fee payment for new daily vehicle trips shall be paid for mobile emission sources, as based on the appropriate fees and worksheet (year current to construction) in the 2022 SCVHA, or most recent Nitrogen Deposition Fee Worksheet. Fees are paid to the Santa Clara Valley Habitat Agency.

Cultural and Tribal Cultural Resources. *Less Than Significant with Mitigation Incorporated*. The project would not impact any known resources that could meet CEQA's criteria for historical resources, unique archaeological resources, or tribal cultural resources. However, previous cultural resources studies in the project area indicate that buried archaeological or ethnographic resources could be encountered during ground disturbing activities at the site. Staff recommends a series of mitigation measures, **CUL-1** through **CUL-3**, to address the discovery of previously unknown buried cultural resources, including human remains. In addition, **CUL-1** proposes to require monitoring by both a qualified archaeological resources specialist and a Native American monitor, and implementing a WEAP. With implementation of these mitigation measures, potential impacts on cultural and tribal cultural resources would be reduced to a less than significant level.

CUL-1: Prior to the commencement of construction, the applicant will secure the services of qualified archaeological specialists and Native American monitors. These specialists and monitors will prepare a workforce environmental awareness program (WEAP) to instruct construction workers of the obligation to protect and preserve valuable archaeological and Native American resources for review and approval by the Director or Director's designee of the City of San José Department of Planning, Building and Code Enforcement (PBCE). This program will be provided to all construction workers via a recorded presentation and will include a discussion of applicable laws and penalties under the laws; samples or visual aids of resources that could be encountered in the project vicinity; instructions regarding the need to halt work in the vicinity of any potential archaeological and Native American resources encountered; and measures to notify their supervisor, the applicant, and the specialists. Submit the qualifications of archaeological specialists and Native American monitors, as well as an electronic copy of the WEAP to the Director or Director's designee of the City of San José PBCE for review and approval.

The applicant will secure the services of a Native American monitor and archaeologist to observe excavations of native soil. 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 of 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.

CUL-2: If archaeological resources are encountered during excavation or grading of the site, all activity within a 50-foot radius of the find shall be stopped, the Director or Director's designee of the City of San José Department of Planning, Building and Code Enforcement (PBCE) shall be notified, and a qualified archaeologist will examine the find. The archaeologist will evaluate the find to determine if they meet the definition of a historical, unique archaeological, or tribal cultural resource and make appropriate recommendations regarding the disposition of such finds prior to issuance of building permits for any construction occurring within the above-referenced 50-foot radius. If the finds do not meet the definition of a historical, unique archaeological, or tribal cultural resource, no further study or protection is necessary prior to project implementation. If the find does meet the definition of a historical, unique archaeological, or tribal cultural resource, then it will be avoided by project activities. If avoidance is not feasible, adverse effects to such resources will be mitigated in accordance with the recommendations of the archaeologist. Recommendations will include collection, recordation, and analysis of any significant cultural materials. A report of findings documenting any data recovery shall be submitted to the Director or Director's designee of the City of San José

Department of PBCE, NAHC (tribal cultural resources), and the Northwest Information Center.

The project applicant will ensure that construction personnel do not collect or move any cultural material and will ensure that any fill soils that may be used for construction purposes does not contain any archaeological materials.

CUL-3: If human remains are discovered during excavation or grading of the site, all activity within a 50-foot radius of the find will be stopped. The Santa Clara County Coroner shall be notified immediately and will 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 shall notify the Native American Heritage Commission (NAHC) within 24 hours of the identification. Once the NAHC identifies the most likely descendant(s) (MLD), the descendant(s) will make recommendations regarding proper burial (including the treatment of grave goods), which will be implemented in accordance with section 15064.5(e) of the California Code of Regulations, Title 14. The archaeologist will recover scientifically valuable information, as appropriate and in accordance with the recommendations of the MLD. A report of findings documenting any data recovery shall be submitted to the Director or Director's designee of the City of San José Department of Planning, Building and Code Enforcement (PBCE) and the Northwest Information Center.

Geology and Soils (paleontology). *Less Than Significant with Mitigation Incorporated*. Earth moving during project construction has the potential to disturb paleontological resources. Staff proposes **GEO-1**, to train construction personnel and guide recovery and processing of any significant paleontological finds. Staff concludes that with implementation of **GEO-1**, impacts to unique paleontological resources would be reduced to a less than significant level. All of impacts under the other CEQA criterion related to geology and soils would either have no impact or have a less than significant impact.

GEO-1:

- The applicant shall secure the services of a qualified professional paleontologist, as defined by the Society of Vertebrate Paleontology, to be on-call prior to the commencement of construction. The paleontologist shall be experienced in teaching non-specialists to recognize fossil materials and how to notify in the event of encountering a suspected fossil. If suspected fossils are encountered during construction, the construction workers shall halt construction within 50 feet of any potential fossil find and notify the paleontologist, who shall evaluate its significance.
- If a fossil is encountered and determined 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 the immediate area shall be halted or diverted to allow recovery of fossil remains in a timely manner. Fossil remains collected shall be cleaned, repaired, sorted, and cataloged, along with copies of all pertinent field notes, photos, and maps.

- The paleontologist shall prepare a paleontological resource monitoring report that outlines the results of the monitoring program and any encountered fossils. The report shall be submitted to the Director, or Director's designee, of the City of San José Department of Planning, Building & Code Enforcement (PBCE) for review and approval. The report and any fossil remains collected, shall be submitted to a scientific institution with paleontological collections.
- Prior to the commencement of construction, the applicant shall secure the services of a qualified paleontological specialist. The specialist shall prepare a Worker Environmental Awareness Program to instruct site workers of the obligation to protect and preserve valuable paleontological resources for review by the Director, or Director's designee, of the City of San José PBCE. This program shall be provided to all construction workers via a recorded presentation and shall include a discussion of applicable laws and penalties under the laws; samples or visual aids of resources that could be encountered in the project vicinity; instructions regarding the need to halt work in the vicinity of any potential paleontological resources encountered; and measures to notify their supervisor, the applicant, and the specialists.

Greenhouse Gas Emissions. *Less Than Significant with Mitigation Incorporated*. With the use of renewable diesel for 100 percent of total energy use by the emergency standby generators and ultra-low sulfur diesel as a secondary fuel in the event of supply challenges or disruption in obtaining renewable diesel, the greenhouse gas (GHG) emissions from the facility's stationary sources would not exceed the 10,000 metric tons of carbon dioxide equivalent per year ($MTCO_2e/yr$) BAAQMD significance threshold for GHG emissions from stationary sources. The fuel-cycle GHG emissions from the emergency backup generators would also be lower than 2,000 $MTCO_2e/yr$, which has been proposed by the BAAQMD staff as an updated GHG threshold of significance but has not been adopted as of the date of this analysis. Staff proposes mitigation measure **GHG-1** to ensure the project owner would use renewable diesel for 100 percent of total energy use by the emergency backup generators, and only use ultra-low sulfur diesel as a secondary fuel in the event of supply challenges or disruption in obtaining renewable diesel. The City of San José Planning, Building and Code Enforcement (PBCE) may grant temporary relief from the 100 percent renewable diesel requirement if the project owner can demonstrate a good faith effort to comply with the requirement and that compliance is not practical. With this measure, the project's GHG emissions from stationary sources would not have a significant direct or indirect impact on the environment.

The City of San José's 2030 GHG Reduction Strategy (GHGRS) is a Qualified Climate Action Plan under CEQA. This project would comply with the requirements of that plan with the proposed design measures and implementation of **GHG-2**, which would require the project owner to participate in San José Clean Energy at the Total Green level (i.e., 100 percent carbon-free electricity) for electricity accounts associated with the project, or enter into an electricity contract with San José Clean Energy or participate in a clean energy program that achieves the same goals of 100 percent carbon-free electricity as the Total Green level.

Pursuant to California Code of Regulations, title 14, section 15183.5, the CEC may rely on that compliance in its analysis of GHG emissions impacts. Accordingly, staff concludes with implementation of **GHG-2**, the project's indirect GHG emissions from electricity use would not have a significant direct or indirect impact on the environment. With implementation of the efficiency measures to be incorporated into the project and mitigation measures **GHG-1** and **GHG-2**, GHG emissions related to the project would not conflict with the City's GHG Reduction Strategy or other plans, policies, or regulations adopted for the purpose of reducing the emissions of GHGs. Because the project would be consistent with applicable plans and policies adopted to reduce GHG emissions and would comply with all regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions, the potential for the project to conflict with an applicable plan, policy or regulation for GHG reductions would be less than significant. With implementation of **GHG-1** and **GHG-2**, impacts related to GHG emissions would be reduced to a less than significant level.

GHG-1: The project owner shall use renewable diesel for 100 percent of total energy use by the emergency backup generators, and only use ultra-low sulfur diesel (ULSD) as a secondary fuel in the event of supply challenges or disruption in obtaining renewable diesel. The City of San José Planning, Building and Code Enforcement (PBCE) may grant temporary relief from the 100 percent renewable diesel requirement if the project owner can demonstrate a good faith effort to comply with the requirement and that compliance is not practical. The project owner shall provide an annual report of the status of procuring and using renewable diesel to the director, or director's designee, of the City of San José PBCE demonstrating compliance with the mitigation measure.

GHG-2: The project owner shall participate in the San José Clean Energy (SJCE) at the Total Green level (i.e., 100 percent carbon-free electricity) for electricity accounts associated with the project, or enter into an electricity contract with SJCE or participate in a clean energy program that accomplishes the same goals of 100 percent carbon-free electricity as the SJCE Total Green Level, to ensure compliance with the city's 2030 Greenhouse Gas Emissions Reduction Strategy.

During operation, the project owner shall provide documentation to the director, or director's designee, with the City of San José Planning, Building and Code Enforcement (PBCE) of initial enrollment and shall submit annual reports to the director, or director's designee, with the City of San José PCBE documenting either continued participation in SJCE at the Total Green level or documentation that alternative measures continue to provide 100 percent carbon-free electricity, as verified by an independent third-party auditor specializing in greenhouse gas emissions.

Hazards and Hazardous Materials. *Less Than Significant with Mitigation Incorporated*. Ground disturbing activities associated with the removal of underground utilities, and construction of the project would have the potential to encounter the identified contaminated soil. Staff proposes mitigation measures requiring the preparation of a Site Management Plan to establish proper procedures to be taken when contaminated

soil is found and how to dispose of the contaminated soil properly (**HAZ-1**) and a Health and Safety Plan to establish provisions for personal protection and procedures if contaminated soil is encountered (**HAZ-2**). Staff concludes that with implementation of **HAZ-1** and **HAZ-2**, impacts to the public or the environment due to contaminated soils, would be reduced to a less than significant level.

HAZ-1: Prior to issuance of demolition or grading permits, the project applicant shall prepare a Site Management Plan (SMP) to guide activities during demolition, excavation, and initial construction to ensure that potentially contaminated soils are identified, characterized, removed, and disposed of properly. The purpose of the SMP is to establish appropriate management practices for handling impacted soil or other materials that may be encountered during construction activities.

The SMP shall be implemented during project demolition and construction and shall include, but shall not be limited to, the following components:

- A detailed discussion of the site background;
- Description of soil testing, which shall include (but not be limited to) the collection of shallow soil samples (upper one-foot) and analyses for lead and organochlorine pesticides to verify presence of absence of unknown soil contamination. This soil profiling shall be performed prior to initiation of project construction.
- Protocols for sampling of in-place soil to facilitate the profiling of the soil for appropriate off-site disposal or reuse, and for construction worker safety, dust mitigation during demolition and construction and potential exposure of contaminated soil to future users of the site prior to project construction.
- Procedures to be undertaken in the event that contamination is identified above action levels or previously unknown contamination is discovered prior to or during project demolition or construction;
- Notification procedures if previously undiscovered significantly impacted soil or free fuel product is encountered during demolition or construction;
- Onsite petroleum contaminated soil reuse guidelines based on the California Regional Water Quality Control Board (RWQCB), San Francisco Bay Region's reuse policy;
- Sampling and laboratory analyses of excess soil requiring disposal at an appropriate off-site waste disposal facility;
- Procedures and protocols for the safe storage, stockpiling, and disposal of contaminated soils; and
- Protocols to manage groundwater that may be encountered during trenching or subsurface excavation activities.

If there are no contaminants identified on the project site that exceed applicable screening levels for construction workers and residential users published by the RWQCB, California Department of Toxic Substances Control (DTSC), or Environmental Protection

Agency, the SMP does not need to be submitted to an oversight agency and instead only needs to be submitted to the City of San José prior to demolition activities.

If contaminants are identified at concentrations exceeding applicable screening levels, the project applicant shall obtain regulatory oversight from Santa Clara County Department of Environmental Health (SCCDEH) or the DTSC under a Site Cleanup Program. The SMP and planned remedial measures shall be reviewed and approved by the SCCDEH or DTSC. A copy of the SMP shall be submitted to the Supervising Environmental Planner of the Department of Planning, Building & Code Enforcement and the Supervising Environmental Compliance Officer in the City of San José's Environmental Services Department. Copies of the approved SMP shall be kept at the project site.

Any contaminated soils identified by testing conducted in compliance with the SMP and found in concentrations above established thresholds shall either be removed and disposed of according to California Hazardous Waste Regulations or the contaminated portions of the site shall be capped beneath the planned development under the regulatory oversight of the Santa Clara County Hazardous Materials Compliance Division (HMCD) or the DTSC. Contaminated soil excavated from the site shall be hauled off-site and disposed of at a licensed hazardous materials disposal site.

HAZ-2: All contractors and subcontractors at the project site shall develop a Health and Safety Plan (HSP) specific to their scope of work and based upon the known environmental conditions for the site prior to project construction. The HSP shall be prepared by an industrial hygienist. The HSP shall be approved by the Director or Director's designee with the City of San José Department of Planning, Building & Code Enforcement and the City of San José Environmental Services Department and implemented under the direction of a Site Safety and Health Officer.

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

- A description of potential health and safety hazards;
- A description of applicable regulations and standards to be implement for the project site;
- Provisions for personal protection and monitoring exposure to construction workers;
- Education for workers in the proper use of personnel protection;
- Provisions for Hazard Communication Standard (HAZCOM) worker training and education including information about HAZCOM labeling, copies of Safety Data Sheets for any hazardous materials that may be used onsite;
- Identification of worker, supervisor, and employer health and safety responsibilities; and
- A description of emergency procedures and identification of responsible personnel to contact in event of an emergency. Include contact information for responsible personnel and other emergency contact numbers.

Copies of the approved HSP shall be kept at the project site.

Noise. *Less Than Significant with Mitigation Incorporated*. The loudest construction activities could elevate the existing ambient noise levels at the nearest residences by up to 11 dBA and could be perceived as noisy. The loudest construction work could elevate the existing ambient noise levels at the nearby commercial and office buildings by up to about 9 dBA. The implementation of mitigation measure **NOI-1**, requiring a noise complaint and redress process, would ensure construction noise impacts as perceived by the community would be less than significant. **NOI-1** would also include several appropriate measures to reduce and control construction-related noise, limit construction work to daytime hours and require notifying project site neighbors of the construction schedule.

Since the project is near a residential land use, noise reduction measures, such as mechanical equipment enclosures and parapet walls, would be required (incorporated in the operational noise modeling). Thus, the operational noise levels would comply with the City's noise limits and would not elevate the existing ambient noise levels at the nearest residences.

The project's construction impacts would be reduced to a less than significant level and operational noise impacts would be less than significant.

NOI-1: Pursuant to General Plan Policy EC-1.7, a construction noise logistics plan shall be prepared that specifies hours of construction, noise and vibration minimization measures, posting or notification of construction schedules, and designation of a noise disturbance coordinator who would respond to neighborhood complaints will be required to be in place prior to the start of construction and implemented during construction to reduce noise impacts on neighboring residents and other uses. Project construction operations shall use best available noise suppression devices and techniques including, but not limited to the following:

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

noise barriers to screen stationary noise-generating equipment when located near adjoining sensitive land uses.

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

Transportation. *Less Than Significant with Mitigation Incorporated*. Project-generated vehicle miles traveled (VMT) per employee would exceed the City's industrial threshold of 14.37 VMT per employee. Staff proposes **TRANS-1,** which would require the project owner to implement multi-modal infrastructure improvements and Transportation Demand Management (TDM) measures, to reduce the project VMT to a less than significant level. Staff concludes that with implementation of **TRANS-1** to lower project generated VMT to a level below the city's industrial VMT threshold, impacts to VMT would be reduced to a less than significant level.

TRANS-1: Prior to the issuance of any City of San José occupancy permit, the project shall implement the following:

1. Provide Pedestrian Network Improvements for Active Transportation (Tier 2 measure) – Implement pedestrian improvements both on-site and in the surrounding area.

   Improving pedestrian connections encourages people to walk instead of drive and reduces VMT. The project owner shall remove the pork-chop islands or provide raised crosswalks at the southwest and southeast corners of the Ringwood Avenue/Trade Zone Boulevard intersection. These improvements will require signal modification and the coordination between the Cities of San José and Milpitas and VTA.

2. Provide Traffic Calming Measures (Tier 2 measure) – Implement pedestrian and bicycle safety and traffic calming measures both on-site and in the surrounding neighborhood.

   Providing traffic calming measures promotes walking and biking as an alternative to driving. The project owner shall construct a raised median island for the existing left-turn pockets along the westbound direction of Trade Zone Boulevard to improve pedestrian safety and access. These improvements will require coordination with the City of Milpitas and VTA.

3. Telecommuting and Alternative Work Schedules (Travel Demand Management measure) – The project owner shall require project employees to telecommute from home when possible, or to shift work schedules such that travel occurs outside of peak congestion periods and commute trips are reduced, thereby reducing VMT. At a minimum, the measure would require that 10 percent of employees work a 4/40 work week schedule (10-hour workdays for four days a week).

Summary

The CEC determines whether the project qualifies for an SPPE and if the project is granted the exemption, the project would seek permits from the local responsible agencies.

1.3 Summary of Alternatives to the Proposed Project

CEQA requires that an EIR consider and discuss alternatives to the proposed project. Section 15126.6 of the CEQA Guidelines provides that an EIR must describe a "reasonable range of potentially feasible alternatives," focusing on those that "would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant environmental effects of the project, and evaluate the comparative merits of the alternatives."

A full analysis of project alternatives is provided in **Section 5 Alternatives**, along with a description of alternatives initially considered and not evaluated further, primarily due to reliability issues. In addition to the No Project/No Build Alternative (Alternative 1), staff carried forward the Natural Gas Internal Combustion Engine Alternative (Alternative 2) for analysis and comparison to the proposed project.

1.3.1 Alternative 1: No Project/No Build Alternative

Staff evaluated a No Project scenario in which no new development of the project site would occur, and current conditions would continue at the site for an unknown period. Although a different project could be proposed at the site in the future, no development plan exists to allow a comparison with the proposed project, and it would be speculative to assume the characteristics of such an alternative. The No Project/No Build Alternative would avoid the proposed project's potentially significant impacts identified in this EIR (no impact compared to the proposed project). Therefore, Alternative 1 is the environmentally superior alternative. If the project were not constructed, the applicant's project objectives would not be attained.

1.3.2 Alternative 2: Natural Gas Internal Combustion Engine (ICE) Alternative

Under the proposed project, the emergency backup generators (gensets) would use renewable diesel as the primary fuel with ultra-low sulfur (conventional) diesel as the secondary fuel. Natural gas internal combustion engines, or ICEs, are fueled by natural gas.

Under Alternative 2, the footprint of the natural gas ICEs might not be the same as for the proposed project's diesel fueled gensets. The number of engines and associated equipment, height, fuel delivery, and onsite fuel storage would be different. However, the massing and locations of the data center buildings would be essentially the same as for the proposed project. Under this alternative, engine startup times would be fast enough that a redesign of the proposed project's uninterruptible power supply (UPS) system would not be needed.

Fuel for the natural gas ICEs could be supplied by the Pacific Gas and Electric (PG&E) underground transmission system. The two closest locations for independent natural gas pipeline connections are one adjacent to the project site on Fortune Drive and one approximately 0.5 mile east of the project site along Trade Zone Boulevard. Due to the susceptibility of natural gas pipelines to natural disasters (e.g., earthquakes) as well as accidents, the ICE fuel delivery and storage system might provide a slightly lower level of reliability than has been demonstrated by the diesel fuel delivery and storage system for many data centers.

Staff compared criteria air pollutant and greenhouse gas emissions of natural gas ICEs to the proposed project's diesel fueled engines. Under Alternative 2, criteria air pollutant emissions and air quality impacts would be much less than those identified under the proposed project. Air toxics emissions would likely be less due to the reductions in volatile organic compounds (VOCs) and particulate matter (PM); therefore, public health impacts using natural gas ICEs would likely be less than under the proposed project. The greenhouse gas (GHG) impacts are likely to be similar to those of the proposed project, but only if renewable natural gas were used for this alternative. Staff considers Alternative 2 to be environmentally superior to the proposed project due to its deep reductions in criteria air pollutants.

1.4 Known Areas of Controversy

The CEC issued a Notice of Preparation (NOP) on June 7, 2022, seeking input from responsible and trustee agencies and the public regarding the scope and context of environmental areas in the EIR. The comment period began on June 7, 2022, and ended on July 6; however, Santa Clara Valley Water District requested, and was granted, an

extension until July 13, 2022. In total, 5 comment letters were received[1]. CEC staff also hosted a public scoping meeting on November 1, 2022, during which environmental areas identified in the NOP were discussed, including project design changes made by the applicant and an issue discovered during the drafting of the EIR. The scope of staff's analysis was considered still sufficient given these changes. There was one public comment that was heard. Issues of concern reflected in these letters and emails include, but are not limited to, the following verbatim excerpts:

- Air Quality and Greenhouse Gas Emissions (GHG):
  - Please review the comments Bay Area Air Quality Management District (BAAQMD) have made in previous proceedings with the CEC, CA3 Backup Generating Facility (21-SPPE-01) and Gilroy Backup Generating Facility (20-SPPE-03) and BAAQMD's recently adopted revisions to the CEQA Thresholds and Guidelines.
  - Concerned about the project's use of diesel as I understand diesel emissions are significant respiratory public health hazards. I greatly appreciate filters and vastly improved machinery if this fuel is to be utilized. I understand renewable diesel, which suggests less emissions, is not readily available at large quantities yet.

- Cultural Tribal Resources:
  - Assembly Bill 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.
  - If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18).

- General:
  - If diesel availability is impacted during emergencies, would, diesel be considered a limiting energy resource during long time period emergencies, potentially such as a large earthquake, which could impact diesel's value for an emergency backup system of many data centers in one area.

- Hazardous Waste:
  - The DEIR should acknowledge the potential for historic or future activities on or near the Project site to result in the release of hazardous wastes/substances on the Project site. In instances in which releases have occurred or may occur, further studies should be carried out to delineate the nature and extent of the contamination, and the potential threat to public health and/or the environment

1 Comment letters were received from Department of Toxic Substances Control, Native American Heritage Commission, Santa Clara Valley Water District, and informal comments from BAAQMD. Also received was a public comment letter from Claire A. Warshaw.

should be evaluated. The DEIR should also identify the mechanism(s) to initiate any required investigation and/or remediation and the government agency who will be responsible for providing appropriate regulatory oversight.

- Refiners in the United States started adding lead compounds to gasoline in the 1920s in order to boost octane levels and improve engine performance. This practice did not officially end until 1992 when lead was banned as a fuel additive in California. Tailpipe emissions from automobiles using leaded gasoline contained lead and resulted in aerially deposited lead (ADL) being deposited in and along roadways throughout the state. Due to the potential for ADL-contaminated soil, DTSC recommends collecting soil samples for lead analysis prior to performing any intrusive activities for the Project described in the DEIR.
- If buildings or other structures are to be demolished on any project sites included in the proposed project, surveys should be conducted for the presence of lead-based paints or products, mercury, asbestos containing materials, and polychlorinated biphenyl caulk. Removal, demolition and disposal of any of the above-mentioned chemicals should be conducted in compliance with California environmental regulations and policies. In addition, sampling near current and/or former buildings should be conducted in accordance with DTSC's 2006 Interim Guidance Evaluation of School Sites with Potential Contamination from Lead Paint, Termiticides, and Electrical Transformers.
- If any projects initiated as part of the proposed Project require the importation of soil to backfill any excavated areas, proper sampling should be conducted to ensure that the imported soil is free of contamination. DTSC recommends the imported materials be characterized according to DTSC's 2001 Information Advisory Clean Imported Fill Material.
- If any sites included as part of the proposed Project have been used for agricultural, weed abatement or related activities, proper investigation for organochlorinated pesticides should be discussed in the DEIR. DTSC recommends the current and former agricultural lands be evaluated in accordance with DTSC's 2008 Interim Guidance for Sampling Agricultural Properties (Third Revision).

- Noise:
  - This project specifies what appears to potentially be an extremely noisy chiller system, plus backup diesel generation which can also be unusual in sound. I am concerned not only for existing project neighbors and businesses, but also potentially for building occupants and workers. Noisy machinery seems particularly difficult to mitigate well.
  - "Understanding Noise Exposure Limits: Occupational vs. General Environmental Noise", Centers for Disease Control and Prevention (CDC) website, "NIOSH Science

Blog," Posted February 8, 2016, by Chuck Kardous, MS, PE; Christa L. Themann, MA, CCC-A; Thais C. Morata, Ph.D. and W. Gregory Lotz, Ph.D.[2]

- U.S. Environmental Protection Agency, "Clean Air Act Title IV - Noise Pollution," authors not listed (as of July 6th, 2022, near 11 am PT)[3], "Noise pollution adversely affects the lives of millions of people. Studies have shown that there are direct links between noise and health. Problems related to noise include stress related illnesses, high blood pressure, speech interference, hearing loss, sleep disruption, and lost productivity. Noise Induced Hearing Loss (NIHL) is the most common and often discussed health effect, but research has shown that exposure to constant or high levels of noise can cause countless adverse health affects."
- Concerns about cumulative noise impacts affecting public health.

- Water Resources:
  - Data centers and manufacturing facilities can use significant amounts of water. Impacts related to water use and an analysis of water supply should be conducted as part of the EIR. Should significant volumes of water be necessary for the project options related to recycled water should be explored.
  - The EIR should include an analysis of Water Quality impacts
  - Valley Water has no right of way at this location; therefore, no encroachment permit will be required. The proposed project is located in FEMA Flood Zone AO (River or stream flood hazard areas with a 1 percent or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet) and may present a flood hazard. The EIR should analyze any flooding impacts.
  - Valley Water records indicate that there are no ground water wells at the project location. While Valley Water has records for most wells located in the County, it is always possible that a well exists that is not in Valley Water's records. If previously unknown wells are found on the subject property during development, they must be properly destroyed under permit from Valley Water or registered with Valley Water and protected from damage. For more information, please call Valley Water's Well Ordinance Program Hotline at 408-630-2660.

In addition to the comments received during the NOP comment period, several comments were received during the development of the Draft EIR. Comments and concerns include concerns that "white noise" might increase due to the project cumulative noise created by different heating and air conditioning machinery, plus street noise, possibly landscaper leaf blowers, construction and/or other machined equipment. Staff has reviewed and

2 https://blogs.cdc.gov/niosh-science-blog/2016/02/08/noise/

3 https://www.epa.gov/clean-air-act-overview/clean-air-act-title-iv-noise-pollution

considered the comments received and address them as appropriate in the applicable section.

1.5 Issues to be Resolved

Staff concluded that all potentially significant impacts can be mitigated to a less than significant level. There are no remaining issues to be resolved.

Section 2

Introduction

2 Introduction

2.1 Energy Commission Jurisdiction and the Small Power Plant Exemption Process

The California Energy Commission (CEC) is responsible for reviewing, and ultimately approving or denying, all thermal electric power plants, 50 megawatts (MW) and greater, proposed for construction in California. Chapter 6 of Division 15 of the Public Resources Code establishes the power plant site certification process through which the CEC exercises this role. Within this authority, Public Resources Code Section 25541, permits the CEC to exempt projects between 50 and 100 MW from its jurisdiction, which allows such projects to proceed with local permitting rather than requiring a CEC license. CEC can grant an exemption if it finds that the proposed project would not create a substantial adverse impact on the environment or energy resources. The CEC has adopted the Small Power Plant Exemption (SPPE) process to review applications for the exemption and determine whether the statutory requirements have been met. See **Appendix A** for more information about the project's jurisdictional and generating capacity analysis.

2.2 CEQA Lead Agency

In accordance with Public Resources Code, section 25519(c) and the California Environmental Quality Act (CEQA), CEC serves as the lead agency to review an SPPE application and perform any required environmental analyses. Upon granting of an exemption, the local permitting authorities—in this case the City of San José and the Bay Area Air Quality Management District—would perform any follow-up CEQA analysis and impose mitigation, as necessary, for granting approval of the project.

2.3 Purpose of the Environmental Impact Report

The purpose of this environmental impact report (EIR) is to provide agency decision makers and the public with objective information regarding the project's significant effects on the environment and energy resources, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. This information will be used by the CEC Commissioners in considering the applicant's request for an SPPE to exempt the project from CEC's power plant licensing jurisdiction and the responsible agencies for project approval and permitting.

Unlike most development project approval processes, the discretionary decision being considered by the CEC is not approval of the applicant's project, but whether the statutory requirements for exemption from CEC's jurisdiction have been met. While the CEC's environmental analysis assesses the applicant's project to support the CEC's jurisdictional decision and uses the term "project" to reference the data center, advanced manufacturing building, and backup generators, it is important to remember that the CEC's discretionary decision is limited to determining the appropriate permitting authority and not approval of the project. Upon exempting the project, the CEC would have no

permitting authority over the project and would not be responsible for any mitigation or permit conditions imposed by the City of San Jose or other local agencies.

2.4 Environmental Process

2.4.1 Notice of Preparation and Public Scoping Meeting

A Notice of Preparation of the EIR was circulated to the public and public agencies from June 7, 2022, to July 6, 2022 (State Clearinghouse #2022060141). The Santa Clara Valley Water District requested, and was granted, an extension until July 13, 2022, to provide information. Because the project's square footage of industrial space is over 650,000 square feet, the project is considered a "project of statewide, regional, or areawide significance" as defined in CEQA Guidelines section 15206, and thus a public scoping meeting is required. On November 1, 2022, staff hosted a public scoping meeting to hear comments on the scope and context of the environmental areas for the EIR. The meeting was noticed on October 20, 2022, consistent with CEQA noticing requirements. Staff reviewed and considered the comments received during the NOP comment period and at the public scoping meeting. Staff has addressed the comments as appropriate in the applicable technical section.

2.4.2 Draft EIR

The Draft EIR will be circulated for agency and public review during a 45-day public review period prior to certification of the document by the CEC. This includes submitting the Draft EIR to the State Clearinghouse, posting the document to the project's CEC docket, and notifying interested persons on the proceeding's list serve of the Draft EIR. The list serve is an automated CEC system by which information about this proceeding is emailed to persons who have subscribed.

2.4.3 Final EIR

Substantive comments received on the Draft EIR will be formally addressed in the Final EIR. The Final EIR will be posted to the project's docket and list serve.

The decision-making body must certify that it has reviewed and considered the information in the Final EIR and that the EIR has been completed in conformity with the requirements of CEQA. The CEC must consider the information in the EIR and respond to each significant effect identified in the EIR. If the CEC Commissioners find that the proposed project would create a substantial adverse impact on the environment or energy resources, the SPPE would be denied.

If the project is determined as qualifying for an exemption, the applicant would seek permits from the responsible agencies, in this case, the City of San José and Bay Area Air Quality Management District. Any required mitigation measures would be enforced by the appropriate responsible agency.

2.5 CEQA Analysis Format

The environmental analysis of this SPPE application takes the form of an EIR, which is prepared to conform to the requirements of CEQA, the CEQA Guidelines (California Code of Regulations, section 15000 et. seq.), and the CEC's regulations and policies. The EIR is based on information from the applicant's SPPE application and associated submittals, site visits, data requests and responses, and additional staff research, including consultation with other agencies, such as responsible and trustee agencies, and relevant information received during any public meetings.

2.5.1 Notification and Coordination

Noticing of documents is governed by both CEC's regulations set forth in California Code of Regulations Title 20 and the CEQA guidelines set forth in Title 14. The specific noticing requirements depend on the document at issue and are described below.

2.5.1.1 Application for Small Power Plant Exemption

The Application for SPPE (Application for Exemption) is filed by the project applicant to initiate the exemption proceeding. As specified in Title 20, section 1936(d), which was in effect when this application was filed, staff provided notice of the Application for Exemption as set forth in Title 20, sections 1713 and 1714.

Section 1713(b) required that a summary of the Application for Exemption be sent to public libraries in the communities near the proposed site as well as libraries in Eureka, Fresno, Los Angeles, San Diego and San Francisco, and to any person who requests such mailing. As required by section 1713(c), the summary was published in a newspaper of general circulation in the county of the project site. In this case the advertisements ran in the San Jose Mercury News (in English), the Vietnam Daily (in Vietnamese), the World Journal (in traditional Chinese), and El Observador (in Spanish). The relevant mailing lists covering the requirements of section 1713(b) are found in **Appendix E**.

In accordance with section 1714, staff provided notification to stakeholder agencies via an Agency Request for Participation letter. This letter provided information on how to participate in CEC's evaluation and decision-making process to agencies with potential interest in the project, most notably the California Department of Fish and Wildlife, the Regional Water Quality Control Board, the local Air Pollution Control District, and various departments of the City of San José's local government. The mailing list used to engage with stakeholder agencies can be found in **Appendix E**.

Staff conducted further outreach to and consultation with regional tribal governments as described in **Section 4.5 Cultural and Tribal Cultural Resources**.

In addition to the required noticing set forth in sections 1713 and 1714, the CEC staff provided public notice of the Application for Small Power Plant Exemption on May 6, 2022, through a Notice of Receipt (NOR). This notice was mailed to adjacent occupants and property owners within 1,000 feet of project site and 500 feet of project linears (for

example, sewer, natural gas, water, transmission line connections). The NOR pointed recipients to the project webpage and included instructions on how to sign up for the project list serve to receive electronic notification of events and the availability of documents related to the SPPE proceeding. The relevant mailing lists staff used for this outreach can be found in **Appendix E**.

2.5.1.2 Notice of Preparation

On June 7, 2022, staff issued a Notification of Preparation (NOP) of an EIR to responsible and trustee agencies, starting a 30-day comment period. The comment period was extended until July 13, 2022, upon request by the Santa Clara Valley Water District. Staff reviewed and considered the comments received during the NOP comment period and addressed them as appropriate in the applicable technical section.

2.5.1.3 Draft Environmental Impact Report

The process for public notification of the Draft EIR is set forth in section 15087 of the CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3) and requires at least one of the following procedures:

(1) Publication at least one time in a newspaper of general circulation in the area affected by the proposed project.

(2) Posting of notice by the lead agency on and off site in the area where the project is to be located.

(3) Direct mailing to the owners and occupants of property contiguous to the parcel or parcels on which the project is located. Owners of such property shall be identified as shown on the latest equalized assessment roll.

To comply with section 15087, staff exceeded the requirements by mailing notification of the Draft EIR to all owners and occupants not just contiguous to the project site but also to property owners within 1,000 feet of the project site and 500 feet of project linears. The Draft EIR was also filed with the State Clearinghouse.

2.6 Organization of this EIR

This EIR is organized into five sections, as described below:

- Section 1 Summary. This section provides a concise overview of the proposed project and the necessary approvals; the environmental impacts that would result from the proposed project; mitigation measures identified to reduce or eliminate these impacts; project alternatives; nature of comments received on the NOP; and areas of known controversy and issues to be resolved.
- Section 2 Introduction. This section describes the type, purpose, and function of the EIR; the environmental review process; and the organization of the EIR.

- Section 3 Project Description. This section summarizes the proposed project, including the location of the site and project boundaries, characteristics of the proposed project, and objectives sought by the proposed project.
- Section 4 Environmental Setting, Environmental Impacts and Mitigation. This section includes the environmental setting; regulatory background; approach to analysis; project-specific and cumulative impacts; and mitigation measures, when appropriate. Staff evaluates the potential environmental impacts that might reasonably be anticipated to result from construction and operation of the proposed project. Staff's analysis is broken down into the following environmental resource topics derived from CEQA Appendix G:

  - Aesthetics
  - Agricultural and Forestry Resources
  - Air Quality
  - Biological Resources
  - Cultural and Tribal Resources
  - Energy
  - Geology and Soils
  - Greenhouse Gases
  - Hazards and Hazardous Materials
  - Hydrology and Water Quality
  - Land Use and Planning
  - Mineral Resources
  - Noise
  - Population and Housing
  - Public Services
  - Recreation
  - Transportation
  - Utilities and Service Systems
  - Wildfire
  - Mandatory Findings of Significance

  In addition, the CEC's CEQA analysis documents include an analysis of how the project would potentially impact an Environmental Justice[1] population.

  For each subject area, the analysis includes a description of the existing conditions and setting related to the subject area, an analysis of the proposed project's potential environmental impacts, and a discussion of mitigation measures, if necessary, to reduce potentially significant impacts to less than significant levels.
- Section 5 Alternatives. This section includes a discussion of a reasonable range of alternatives to the proposed project, or to the location of the project, which could feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and an evaluation of the comparative merits of the alternatives. This section also includes an evaluation of the no project alternative.

Section 3

Project Description

3 Project Description

STACK Infrastructure (STACK) is seeking a Small Power Plant Exemption (SPPE) from the California Energy Commission's (CEC) jurisdiction to proceed with local permitting rather than requiring certification by the CEC for the Trade Zone Boulevard Technology Park (STACK Trade Zone Park or project). The project would include an advanced manufacturing building (AMB), the SVY data center (SVYDC), the SVY backup generating facility (SVYBGF), a parking garage, and related utility infrastructure.

As noted in **Section 1 Introduction**, the discretionary decision being considered by the CEC is not approval of the STACK Trade Zone Park, but whether such approval can be considered by the City of San José or must it stay with the CEC. While this environmental analysis assesses the project to support the CEC's jurisdictional decision, it is important to remember that the CEC's discretionary decision is limited to determining the appropriate permitting authority and not approval of the project. However, the City of San José as the permitting authority for the project, and therefore a responsible agency, would rely on the CEC's environmental impact report (EIR) for purposes of California Environmental Quality Act (CEQA) clearance during the entitlement processing.

3.1 Project Title

STACK Trade Zone Park

3.2 Lead Agency Name and Address

California Energy Commission
715 P Street
Sacramento, California 95814

3.3 Lead Agency Contact Person and Phone Number

Lisa Worrall, Senior Environmental Planner
Siting, Transmission and Environmental Protection Division
California Energy Commission
(916) 661-8367

3.4 Project Location

The project site consists of two parcels encompassing approximately 9.8 acres, located at 2400 Ringwood Avenue and 1849 Fortune Drive in San José, California. The project site is located at the corner of Trade Zone Boulevard and Ringwood Avenue. **Figure 3-1** shows the regional location and **Figure 3-2** identifies the project location.

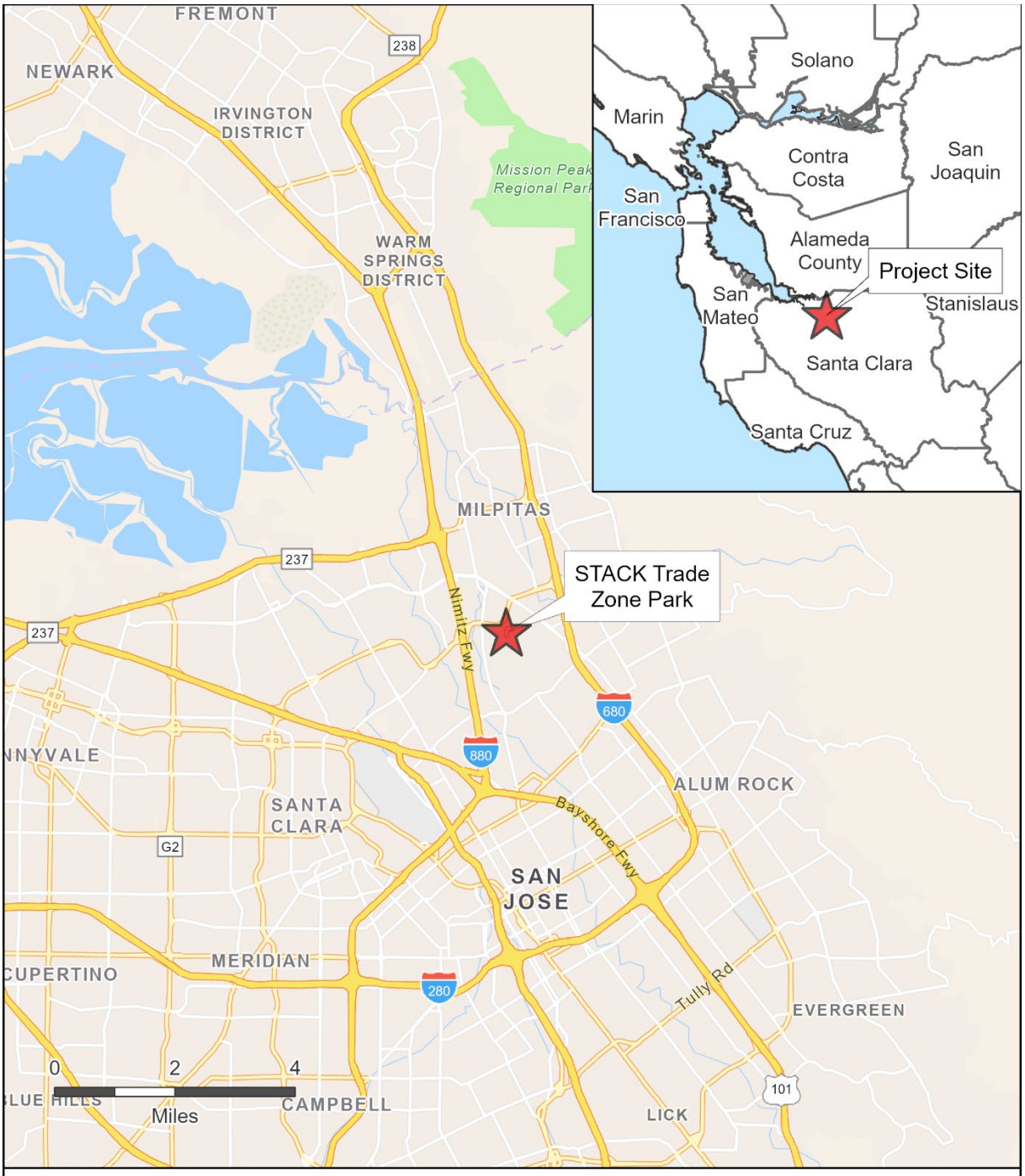

Figure 3-1
Regional Map

Source: DayZenLLC 2022a Figure 2.2-1

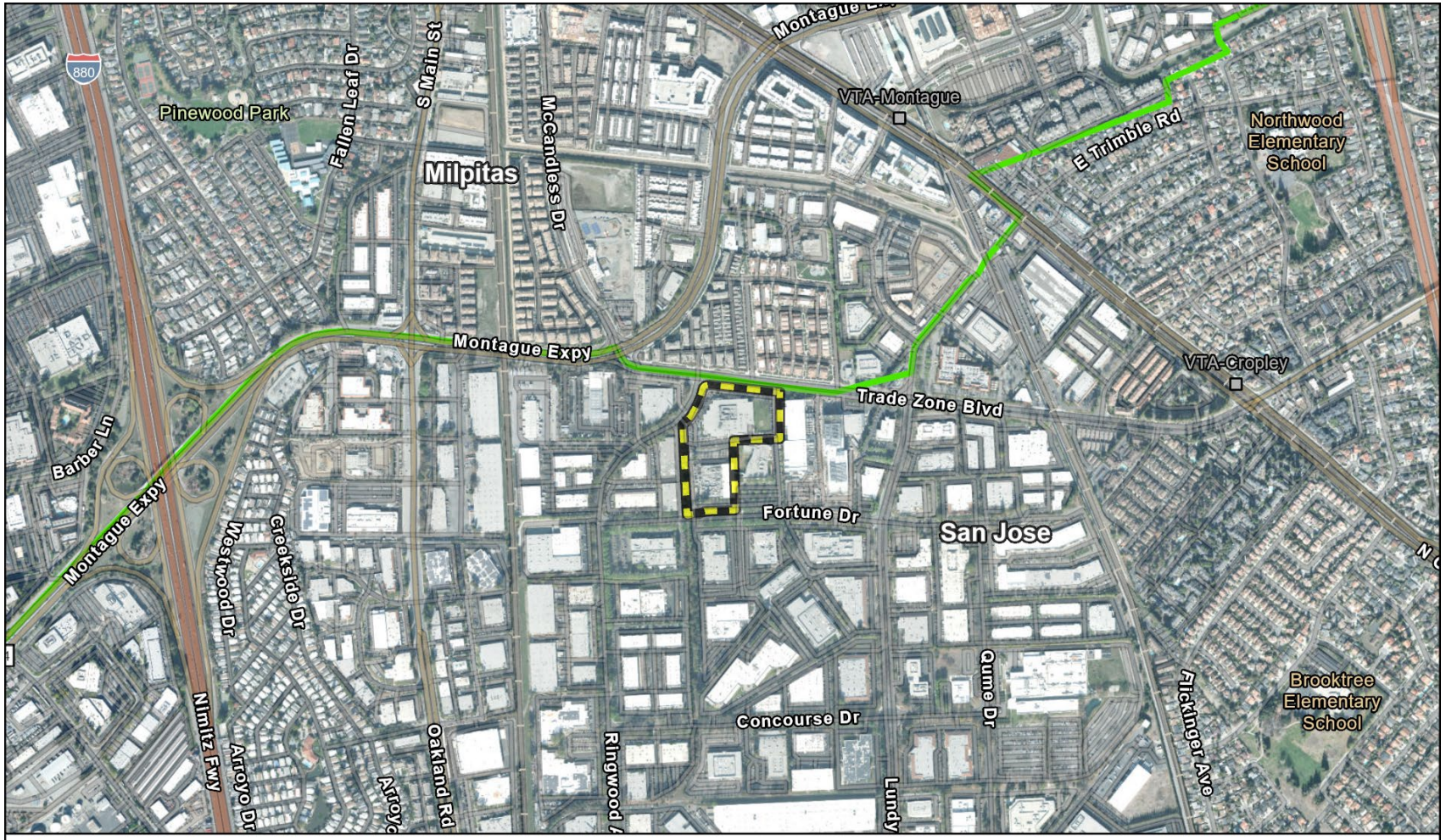

Figure 3-2
Project Location

Source: DayZenLLC 2022a Figure 2.2-3

3.5 Project Objectives

The applicant has identified the following project objectives:

- Develop a state-of-the-art data center large enough to meet projected growth;
- Locate the data center near technology infrastructure and near existing STACK data centers to minimize latency and optimize for customer regional economies of scale;
- Develop an AMB that facilitates the growth of the advanced manufacturing sector in North San José and continues a presence of advanced manufacturing activities in this market;
- Develop the data center and AMB as a mixed-use campus on land with zoning consistent with these uses and at a location acceptable to the City of San José;
- Develop a data center that can be constructed in phases which can be timed to match projected growth;
- Incorporate the most reliable and flexible form of backup electric generating technology into the SVY backup generating facility (SVYBGF) considering the following evaluation criteria.
    - Reliability. The selected backup electric generation technology must be extremely reliable in the case of an emergency loss of electricity from the utility.
        - The SVYBGF must provide a higher reliability than 99.999 percent in order for the SVYDC to achieve an overall reliability of equal to or greater than 99.999 percent reliability.
        - The SVYBGF must provide reliability to greatest extent feasible during natural disasters including earthquakes.
        - The selected backup electric generation technology must have a proven built-in resilience so if any of the backup unit fails due to external or internal failure, the system will have redundancy to continue to operate without interruption with no single point of failure.
        - The selected backup electric generation technology must include achieved in practice engineering methods, procedures and equipment.
        - The SVYDC must have on-site means to sustain power for 24-hours minimum in failure mode, inclusive of utility outage.
    - Commercial Availability and Feasibility. The selected backup electric generation technology must currently be in use and proven as an accepted industry standard for technology sufficient to receive commercial guarantees in a form and amount acceptable to financing entities. It must be operational within a reasonable timeframe where permits and approvals are required and with a supply of fuel that is within service level agreement thresholds to sustain customers and server uptime.

- Technical Feasibility. The selected backup electric generation technology must utilize systems that are compatible with one another and be maintainable in a reasonable fashion achieving timely switch outs, repairs and maintenance. Warranty and support must be within practical means to achieve optimum uptime during failures within the utility power supply. The backup solution must also achieve industry standard start times in the event of an outage in order to avoid interruption of power to the equipment within the data center.

3.6 Land Use Zoning Conformance

The project site is currently zoned Industrial Park (IP), which permits medium manufacturing, while data centers are allowed upon issuance of a Special Use Permit, and utility facilities are allowed upon issuance of a Conditional Use Permit. Because the site is designated Transit Employment Center (TEC) (not IP) in the General Plan, the city of San José recommended the applicant apply for a Planned Development Rezoning from the current IP Zoning District to the TEC (PD) Planned Development Zoning District using the TEC zoning designation for primary guidance. The project would require rezoning to TEC (PD) Planned Development Zoning District and implementation of the proposed development standards (DayZenLLC 2022r, DayZenLLC 2022s). The project would require a planned development permit in accordance with the rezone. See **Section 4.11 Land Use** for more information.

3.7 Project Overview and General Description of the Project's Technical and Environmental Characteristics

Advanced Manufacturing Building (AMB)

The AMB would comprise a four-story building of approximately 136,573 square feet of light industrial and ancillary support uses (DayZenLLC 2022f, DR Set 1 response #34). The AMB would be clad with curtain wall and metal panel systems. The height of the AMB would be approximately 83 feet to the top of the parapet. The AMB would be served by a PG&E distribution circuit at 20.78 kV (DayZenLLC 2022f, DR Set 1 response #48).

Data Center

The SVYDC would include two four-story buildings encompassing approximately 522,194 square feet. Building SVY05 would be approximately 220,012 square feet and building SVY06 would be approximately 302,182 square feet (DayZenLLC 2022f, data request (DR) response #34). The administrative section of the data center buildings would be approximately 80 feet in height to the top of parapet and approximately 67.5 feet for the remaining data center. The mechanical equipment screen on the roof of the building would extend to 78 feet in height from the top of the slab above the data halls. The data center buildings would house computer servers for private clients in a secure and environmentally controlled structure and would be designed to provide 60 megawatts (MW) of power to information technology (critical IT) equipment. The data center

buildings would consist of two main components; the data center suites that would house client servers, and the administrative facilities including support facilities such as the building lobby, restrooms, conference rooms, landlord office space, customer office space, loading dock and storage.

The data center suite components would consist of three levels of data center space and a fourth level for the administration section of the building. Each level of SVY05 would contain one data center suite and corresponding electrical/ uninterruptible power supply (UPS) room. Each level of SVY06 would contain two data center suites and corresponding electrical/UPS room. The data center is being designed with an average rack power rating of 8 kilowatts (kW).

The data center buildings would be composed of administration, data hall, and loading dock masses. The administration portion would be clad with curtain wall and metal panel systems. The data hall portion would be clad primarily with pre-manufactured stucco panels. Additionally, the building façade of the Data Center Building SVY05 would include a screen extending from 30 feet above grade to 76 feet above grade to shield the view of cable trays running up the façade. The top of the parapet at the data hall would be at 67-1/2 feet. The top of parapet at the admin portions would be 80 feet. A rooftop dunnage platform (structural platform for mechanical equipment) would be provided at 69 feet for mechanical equipment. Noise attenuation consists of an extension of the parapet wall on the sides of the data center buildings facing the commercial property to approximately 16 feet above roof height, an addition of an approximately 16-foot -high noise wall along the central-eastern property line, and an addition of a parapet wall on the northern and eastern sides of the single-story portion of SVY06, approximately 6.6 feet above roof height.

Uninterruptible Power Supply (UPS) System Description

The UPS system and batteries are part of the SVYDC and are not part of the SVYBGF. The UPS would protect the load against surges, sags, under voltage, and voltage fluctuation. The UPS would have built-in protection against permanent damage to itself and the connected load for all predictable types of malfunctions. The load would be automatically transferred to the bypass line without interruption in the event of an internal UPS malfunction. Each battery bank in UPS system would provide a minimum of five minutes of backup at 100 percent rated inverter load per 1000 kW module, at 77 degrees Fahrenheit (25 degrees Celsius), 1.67 end volts per cell, beginning of life.

Substation and Transmission Line

The project would construct a new 100 MVA (mega volt-ampere) electrical substation along the eastern boundary of the site to be owned and operated by the applicant and a switchyard to be owned and operated by Pacific Gas and Electric Company (PG&E). The two-bay substation (two 100 MVA 115 kilovolt (kV)/34.5 kV step-down transformers (each rated 60/80/100 MVA) and primary distribution switchgear) would be designed to allow one of the two transformers to be taken out of service, effectively providing 100 MVA of

total power (a 2-to-make-1 design) (DayZenLLC 2021a and DayZenLLC 2022f, DR Set 1 response #48, DayZenLLC 2022t). The switchyard would be built in a Breaker and a Half (BAAH) configuration. This would consist of two incoming 115 kV circuits entering a BAAH configuration consisting of six 115 kV circuit breakers, steel structures, 115 kV switches, metering devices, and a non-occupied control enclosure.

The substation would have an all-weather asphalt surface underlain by an aggregate base. A concrete masonry unit screen wall, 13 feet in height, would surround portions of the substation with the remainder of the substation protected with an 8-foot height chain link fence. An oil containment pit surrounding each transformer would capture unintended oil leaks. Access to the substation would be from through the project site off Trade Zone Boulevard.

The substation would be capable of delivering electricity to the SVYDC from a new PG&E circuit but would not allow any electricity generated from the SVYBGF to be delivered to the transmission grid. Availability of substation control systems would be ensured through a redundant direct current battery backup system.

To serve the project, PG&E would be constructing a "looped" transmission interconnection involving two offsite transmission lines. The first extension would involve a line from the west that comprises a single circuit 115 kV OH (Overhead) Transmission line (T-Line) from the existing PG&E Newark-Milpitas #2 115 kV Line which is located on the southwest side of the intersection of Trade Zone Boulevard and Montague Expressway. The route to the site would be approximately 0.25 mile and the line would be supported on existing OH Transmission Towers and is located along the south side of Trade Zone Boulevard. It is possible that up to three or more of the existing seven OH Transmission Towers may need to be replaced. The four to six new tubular steel poles would be between 70 and 130 feet in height (DayZenLLC 2022s).

The second transmission line would be a single circuit 115 kV UG (underground) T-Line that would interconnect the existing PG&E Newark-Milpitas #2 115 kV Line which is located on the southeast side of the intersection of Trade Zone Boulevard and Montague Expressway. The route to the site for the second line would be approximately 0.25 mile and would be underground within the northern side of Trade Zone Boulevard right of way then cross from north to south to the site. **Figure 3-3** shows the route of the overhead and underground transmission lines.

Backup Generators

The SVYBGF would be an emergency backup generating facility with a generation capacity of up to 91 MW to support the need for the SVYDC to provide uninterruptible power supply for its tenant's servers. The SVYBGF would serve only the SVYDC. The SVYBGF would consist of 36 3-MW and 3 1-MW diesel-fired backup generators arranged in two generation yards, each designed to serve one of the two data center buildings

Figure 3-3
Proposed Transmission Line Route

Source: DayZenLLC 2021a and CEC staff

(SVYDC 05 and SVYDC 06) that make up the SVYDC. One of the 1 MW diesel-fired backup generators would be installed near the southwest corner of the AMB. All the generators would be dedicated to replace the electricity needs of the data center buildings and the emergency power needs of the AMB (with redundancy) in case of a loss of utility power. The larger generators are designed to replace the electricity needed to serve the data halls, and all three of smaller generators would be used to support redundant house critical cooling equipment and other general building and life safety services (house generators). Switchgear and distribution cabling would be included to interconnect the generators to their respective portions of the buildings.

Generator System Description

Each of the 36 large generators for the data center suites would be Caterpillar Model 3516E standby emergency diesel fired generators are all rated at >1000 HP, and as such they must meet the Bay Area Air Quality Management District (BAAQMD) best available control technology (BACT) guidelines which requires Tier 4 compliance. Each of these engines would be equipped with add-on controls that consist of diesel particulate filter and the Miratech selective catalytic reduction control system. The emissions and impacts were based upon the use of and compliance with the EPA Tier 4 limits (DayZenLLC 2022f, DR Set 1 response #3).

The maximum peak generating capacity of each generator is 3 MW for standby applications (short duration operation). Under normal operation, due to the block redundant configuration, the maximum load on each generator is designed to be less than 100 percent of the peak capacity.

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

Each stacked pair of generators would have an integrated dedicated base fuel tank and urea tank within the generator enclosure. The upper generator would have a smaller day fuel tank. The upper generators would be supported by a structural steel platform and the lower generators will be supported by concrete pads. The generators enclosures would be approximately 13 feet wide, 53 feet long and 29 feet high. Each generator would have a stack height of approximately 57.5 feet above grade. The generators at both levels would have approximately 6 feet clear between adjacent generators.

Each of the 1 MW house generators would be a Caterpillar model and would also meet Tier 4 emission standards.

Generation Capacity and PUE

Based on the methodology recently adopted in the CEC's Final Decisions Granting SPPEs for the last five data center backup generating facilities, the maximum generating capacity of the SVYBGF is determined by the maximum of capacity of the load being served.

The design demand of the SVYDC is based on the maximum critical IT load and maximum mechanical cooling electrical load occurring during the hottest hour in the last 20 years. Such conditions are possible but extremely unlikely to ever occur. The SVYDC load on that worst-case day would be 90 MW.

The data center industry utilizes a factor called 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 infrastructure serving the critical IT spaces (including IT load) by the critical IT load itself. The theoretical peak PUE for the Worst Day Calculation would be 1.5 (Total 90 MW demand of building on Worst Case Day divided by 60 MW Total Critical IT Load). The average annual PUE would be 1.3 (Total 78 MW demand of building average conditions divided by 60 MW Design Critical IT Load). These PUE estimates are based on design assumptions and represent worst case. For more information about PUE, see **Section 4.6 Energy**.

Fuel System

The backup generators would use renewable diesel fuel as its primary fuel or ultra-low sulfur diesel as secondary fuel (<15 parts per million sulfur by weight). Approximately 5,200 gallons of fuel are required for a 24-hour operation of each generator. The generators would have a combined diesel fuel storage capacity of approximately 237,500 gallons, which is sufficient to provide more than 24 hours of emergency generation at full electrical worst-case demand of the SVYDC.

Cooling System

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

Utility Interconnections

As part of the construction of the new buildings, domestic water, reclaimed water, fire water, sanitary sewer, fiber, and storm drain connections would be made from the City infrastructure systems located along Trade Zone Boulevard, Ringwood Avenue, and Fortune Drive. Connections would be made for each of the proposed buildings, as well as connections for site use. The project intends to relocate an existing public potable water line in a public utility easement on-site. The public potable water line would be relocated due to various conflicts with the proposed civil and architectural improvements. The project would attempt to utilize existing utility laterals, but this would be determined during final design.

Stormwater

The San Francisco Bay Regional Water Quality Control Board has issued the Municipal Regional Stormwater NPDES Permit (MRP) to regulate stormwater discharges from municipalities and local agencies. Under Provision C.3 of the MRP, new and redevelopment projects that create or replace 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 (for example, rainwater harvesting for non-potable uses). Examples of C.3 LID measures include bioretention areas, flow-through planters, and subsurface infiltration systems.

The design of the project proposes to construct stormwater treatment areas consisting of LID bioretention areas and at-grade flow-through planter boxes totaling approximately 15,000 square feet, based on preliminary impervious calculations, sized according to the requirements of the MRP. The stormwater treatment areas would be located around the perimeter of the site, and adjacent to paved parking areas and buildings.

The project would attempt to use the existing stormwater laterals that connect into the public system at four locations, but this would be determined during final design. The four lateral locations are, one lateral north of the property along Trade Zone Boulevard, two laterals northwest of the property along Ringwood Avenue, and one lateral south of the property along Fortune Drive.

Downspouts for the roof drainage would discharge into bioretention areas or flow-through planters located adjacent to the building. In some cases, roof drainage would be piped under sidewalks and discharged to the pavement surface where stormwater would then surface flow to at-grade bioretention planters located along the perimeter of the site.

Flow-through planters and bioretention planters would include perforated underdrains and overflow structures that connect to the on-site storm drains system, which would eventually discharge to the public storm systems in Trade Zone Boulevard, Ringwood Avenue, and Fortune Drive. According to Appendix E-2, HMP Applicability Map, of the "C.3 Stormwater Handbook" published by the Santa Clara Valley Urban Runoff Pollution Prevention Program the project site is in a "red area", defined as catchments and subwatersheds greater than or equal to 65 percent impervious. According to the MRP, hydromodification controls are not required for projects located in red areas of the HMP Applicability Map. Therefore, the project would not incorporate hydromodification controls into the project's development.

Landscaping

The project as designed, proposes to remove 156 trees on-site, due to various conflicts with proposed civil and architectural improvements.

New landscaping consisting of trees, large and medium shrubs, and groundcovers would be installed along the property boundaries, building perimeters, stormwater treatment facilities, and landscape beds distributed throughout the parking facilities. Trees would be planted a minimum of five feet away from new or existing water mains or utility lines.

General Site Arrangement and Layout

The general site arrangement and layout of the project is presented in **Figure 3-4**.

Advanced Manufacturing Building

The AMB would be in the northwest corner of the site (DayZenLLC 2022f, DR Set 1 response #34). The AMB would be located a minimum of 25 feet from the property line along Trade Zone Boulevard and a minimum of 20 feet from the property line along Ringwood Avenue.

Data Center

Building SVY05 would be located a minimum of 20 feet from the property line along Ringwood Avenue immediately south of the AMB. Building SVY05 would be immediately adjacent and to the west of the parking structure and would be located to the north of Building SVY06.

Building SVY06 would be located to the south of Building SVY05 and north of Fortune Avenue with a minimum setback of 25 feet from the property line along Fortune Avenue, a minimum setback of 10 feet from eastern property line, and approximately 45 feet from western property line.

Backup Generators

The 39 emergency backup generators (36 for the data center suites and 3 house generators) would be located at the site in two generation yards adjacent to the data center building it serves. One of the smaller generators would be located next to the AMB. Data Center building SVY05 would be supported by 16 generators and Data Center Building SVY06 would be supported by 22 generators.

The generators would be installed in a stacked configuration. Each stacked pair of generators would be supported by a 12,000-gallon diesel fuel tank at the base of the stacking structure with a 500-gallon diesel fuel tank installed within the upper generator package. Each stacked pair of generators would be supported by a main urea tank installed below the lower generator. The generators packages and tanks would be enclosed in acoustical enclosures.

Each generation yard would be electrically connected to only the SVYDC building it serves through above ground conduit and wire to a location within the building that houses electrical distribution equipment. A single house generator would be similarly connected to the AMB.

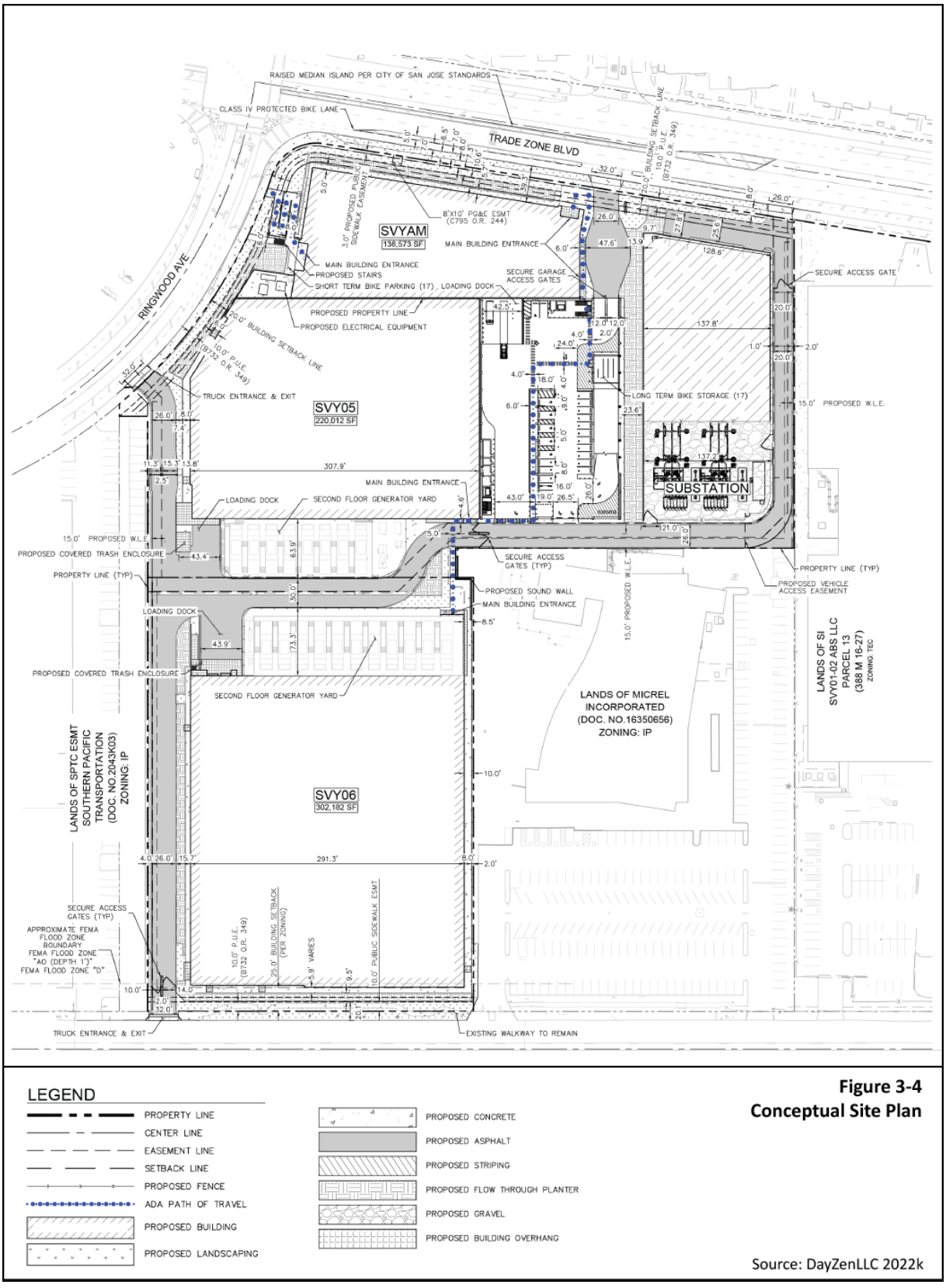

Figure 3-4
Conceptual Site Plan

Source: DayZenLLC 2022k

Site Access, Employment and Parking

The overall project site would include three entrances, each at the same locations for the existing buildings. One entrance would be from Trade Zone Boulevard, one from Ringwood Avenue, and two from Fortune Avenue.

The project would provide a total of approximately 339 parking spaces in an approximately 174,751 square foot on-site parking garage. The parking garage would serve both data centers and the advanced manufacturing buildings. As required by City Code the parking garage would include 10 accessible parking, 34 electric vehicle parking, 41 clean air parking, and 3 accessible electric vehicle parking spaces.

3.8 Project Construction

The site is currently developed with two existing one-story buildings; one at 2400 Ringwood Avenue and the second at 1849 Fortune Drive. Both buildings would be demolished as part of this project.

Demolition and Construction Phasing

Demolition, grading, excavation and construction would take place in two phases. Phase I would include demolition of the two existing buildings and infrastructure that cannot be reused; grading of the entire site; installation of utility services including interim power and construction of the on-site substation, PG&E switchyard and associated PG&E distribution upgrades; construction of the AMB, Building SVY05, and the parking structure. Phase I activities are anticipated to begin in second quarter 2023 and take approximately 16-19 months to complete. Phase I's construction workforce would have a peak workforce of 150 per month and an average workforce of approximately 100 per month. Phase II would include construction of Building SVY06. Phase II construction would begin as soon as commercially feasible, likely in late 2024 and take approximately 16 months to complete for commercial operation at the beginning of 2026 (DayZenLLC 2023a). Phase II's construction workforce would have a peak of approximately 200 per month with an average workforce of approximately 80 per month.

Construction activities for the project are expected to begin in April 2023. Since the site preparation activities for the SVYDC would include the ground preparation and grading of the entire project site, the only construction activities for the SVYBGF would involve construction of the generation yards at each SVYDC Building. This would include construction of concrete foundations and structural steel framing, fencing, installation of underground and above ground conduit and electrical cabling to interconnect to the SVYDC Building's switchgear, and placement and securing the generators.

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

Construction of the generation yards and placement of the generators is expected to take six months and is included in the overall construction schedule for the SVYDC. Construction personnel for the SVYBGF are estimated to range from 10 to 15 workers including one crane operator. All staging areas and construction parking are anticipated to be on site (DayZenLLC 2022f, DR Set 1 response #27).

Soil and Drainage

It is possible that up to 34,000 cubic yards of fill would be required for the site. Per geotechnical considerations, it is recommended that the maximum depth of required excavation would be approximately two feet. For improvements at-grade that are not supported on a structural slab, the soil subgrade should be kept moist until it is covered by imported fill. The maximum depth below existing grade for any of the drainage facilities (bioretention areas) is 6 foot 8 inches below existing grade. The drainage facilities for the site are spread evenly throughout the site plan. The total amount of area of drainage facilities provided for the site is approximately 15,000 square feet. The maximum extent of excavation for the drainage facilities on-site is 100,000 cubic-feet or 3,750 cubic-yards.

Water Use

Grading and construction of the project is estimated to utilize 1.75-acre feet of water over the 35-month construction period for Phase I and Phase II.

Waste Management

The SVYBGF would not create any waste materials other than minor amounts of solid waste created during construction activities.

3.9 Facility Operation

The backup generators would be run for short periods for testing and maintenance purposes and otherwise would not operate unless there is a disturbance or interruption of the utility supply. Bay Area Air Quality Management District's Authority to Construct and the California Air Resources Board's Airborne Toxic Control Measures limits each engine to no more than 50 hours annually for reliability purposes (testing and maintenance). A maximum of eight engines would be tested on any given day between 7:00 AM to 7:00 PM and would be restricted to non-concurrent testing periods, i.e., only one engine will be tested at any given time (DayZenLLC 2022f, Responses to DR Set 1 response #9 and #15). Engines may be tested at loads ranging from 10 to 100 percent depending upon the maintenance procedures established by the applicant.

Water Use

The SVYBGF would not require any consumption of water and neither the AMB nor the SVYDC would require water to cool the facility. The buildings would utilize air cooled chillers for office and critical cooling. For the SVYDC, the facility water use would be limited to occupant domestic water use and process water for humidifiers within the

critical spaces to maintain design conditions. Total potable water use at full buildout of the project is estimated to be approximately 11-acre feet per year (AFY). Landscaping for the site is estimated to use up to 1 AFY and would use reclaimed water. Historical use at the site is approximately 3.2 AFY.

Hazardous Materials Management

The SVYBGF would prepare a Spill Prevention, Control and Countermeasure Plan 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 double walls. The interstitial space between the walls of each tank is continuously monitored electronically for the existence of liquids. This monitoring system is electronically linked to an alarm system in the engineering office that alerts personnel if a leak is detected. Additionally, the standby generator units are housed within a self-sheltering enclosure that prevents the intrusion of storm water.

Diesel fuel would be delivered on an as-needed basis in a compartmentalized tanker truck with maximum capacity of 8,500 gallons. The tanker truck parks on the access road to the south of the generator yard and extends the fuel fill hose through one of multiple hinged openings in the precast screen wall surrounding the generator equipment yard.

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, storm drains would be temporarily blocked off by the truck driver and/or facility staff during fueling events. Rubber pads or similar devices would 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 would be scheduled at times when storm events are improbable.

Warning signs and/or wheel chocks would 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 would be utilized if a pump hose breaks while fueling the tanks. Tanker truck loading and unloading procedures would be posted at the loading and unloading areas.

Diesel exhaust fluid which contains urea is used as part of the diesel engine combustion process to meet the emissions requirements. The diesel exhaust fluid would be stored in one approximately 400-gallon tank located within the enclosure of the lower generator in each stacked pair. These tanks can be filled in place from other drums, totes, or bulk tanker truck at the tank top.

Waste Management

Minor amounts of solid waste would be created by the SVYBGF during maintenance activities.

Workforce

The total employment anticipated for the entire project after full site buildout is expected to be approximately 339 (269 for the AMB and 70 employees for the SVYDC).

3.10 Intended use of the EIR

As the lead agency pursuant to CEQA, the CEC is responsible for the preparation of this EIR. The CEC will use this EIR in support of its discretionary decision to grant or deny the small power plant exemption application. As noted, the CEC is not rendering any decision to approve or deny the construction of the project. If the exemption is granted, the EIR is expected to be used by the city of San José in its consideration of permitting the project as well as by the BAAQMD for its issuance of various air quality permits. Upon exempting the project, the CEC would have no permitting authority over the project and would not be responsible for any mitigation or permit conditions imposed by the city of San José or the BAAQMD.

In developing this EIR CEC staff consulted with tribes requesting such engagement, with the City of San José, the Santa Clara Valley Habitat Agency, the California Department of Fish and Wildlife, the BAAQMD, and the United States Fish and Wildlife Service.

3.11 References

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DayZenLLC 2022f – DayZenLLC (DayZenLLC). (TN 243473). STACK TZP Responses to CEC Data Request Set 1, dated June 7, 2022. Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-SPPE-02

DayZenLLC 2022k – DayZenLLC (DayZenLLC). (TN 245892). STACK TZP Responses to CEC Data Request Set 2 – Part I, dated September 7, 2022. Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-SPPE-02

DayZenLLC 2022n – DayZenLLC (DayZenLLC). (TN 246142). STACK Trade Zone Park Revised Project Description, dated September 19, 2022. Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-SPPE-02

DayZenLLC 2022r – DayZenLLC (DayZenLLC). (TN 246382). STACK TZP Revised Supplemental Response to DR 73, dated October 6, 2022. Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-SPPE-02

DayZenLLC 2022s – DayZenLLC (DayZenLLC). (TN 246382). STACK TZP Revised Supplemental Response to DR 73 – Typo Corrected, dated October 6, 2022.

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DayZenLLC 2022t – DayZenLLC (DayZenLLC). (TN 246693). STACK Supplemental Response to DRs Set 1 and 2 – TZP, dated October 20, 2022. Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-SPPE-02

DayZenLLC 2022u – DayZenLLC (DayZenLLC). (TN 246767). STACK Responses to CEC Data Request Set 3 – TZP, dated October 24, 2022. Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-SPPE-02

DayZenLLC 2023a – DayZenLLC (DayZenLLC). (TN 248371). Report of Conversation - Minor Changes to Phase II Construction Date, dated January 12, 2023. Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-SPPE-02

Section 4

Environmental Setting and Environmental Impacts

4 Environmental Setting, Environmental Impacts and Mitigation

Under the California Environmental Quality Act (CEQA), the environmental setting of a project is generally the physical environmental conditions in the vicinity of the project as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced (CEQA Guidelines, § 15125(a)(1)). The environmental setting described in an EIR by the lead agency will normally constitute the baseline physical conditions by which the lead agency determines whether an impact is significant (CEQA Guidelines, § 15125(a)).

4.1 Aesthetics

This section describes the environmental setting and regulatory background and discusses impacts pertaining to aesthetics associated with the construction and operation of the project in the existing landscape.[1]

AESTHETICS Except as provided in Public Resources Code section 21099[2], would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	☐	☐	☒	☐
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Environmental checklist established by CEQA Guidelines, Appendix G.

4.1.1 Environmental Setting

The proposed project would be constructed on relatively flat land in a highly developed urban area within the northern portion of the City of San José, California. Interstate 880 (I-880) is less than a mile to the west, I-680 one mile to the east. Norman Y. Mineta San José International Airport is a little more than three miles to the southeast.

1 Landscape is defined as, "The outdoor environment, natural or built, which can be directly perceived by a person visiting and using that environment. A scene is the subset of a landscape which is viewed from one location (vantage point) looking in one direction." (Hull and Revell 1989) "The term landscape clearly focuses upon the visual properties or characteristics of the environment, these include natural and man-made elements and physical and biological resources which could be identified visually; thus non-visual biological functions, cultural/historical values, wildlife and endangered species, wilderness value, opportunities for recreation activities and a large array of tastes, smells and feelings are not included." (Daniel and Vining 1983; Amir and Gidalizon 1990)

2 Public Resources Code section 21099 asks is the proposed project an "employment center project" on an "infill site" within a "transit priority area" as defined in this section. Public Resources Code section 21099(d)(1) states, "Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment."

Land uses in the vicinity of the project site are primarily intensive commercial and industrial to the south, east, and west, and residential to the north.

The project site is approximately 9.8 acres. The property has two existing one-story buildings (approximately 80,000 and 55,000 square feet), other improvements, trees and landscaping. The buildings and improvements are to be removed from the site.

The project's major publicly visible buildings and structures include the four-story advanced manufacturing building (AMB) approximately 136,573 square feet, two four-story data buildings: SVY05 220,012 square feet, SVY06 302,182 square feet, and five-level parking garage 174,751 square feet. The project also includes 39 emergency backup diesel generators in two generator yards, and a substation served by two offsite 115-kilovolt (kV) transmission lines. One transmission line overhead along the south side of Trade Zone Boulevard. The second transmission line underground along the north side of Trade Zone Boulevard crossing to the project site. Refer to **Section 3 Project Description** for details about the project.

Regulatory Background

Federal

No federal regulations related to aesthetics apply to the project.

State

Public Resource Code section 21099. Section 21099 asks is the proposed project an "employment center project" on an "infill site" within a "transit priority area" as defined in this section. For purposes of section 21099, "the following terms mean the following:

- (1) 'Employment center project' means a project located on property zoned for commercial uses with a floor area ratio of no less than 0.75 and that is located within a transit priority area. ...
- (4) 'Infill site' means a lot located within an urban area that has been previously developed, or on a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses. ...
- (7) 'Transit priority area' means an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations." (Public Resources Code section 21099)

Public Resources Code section 21099(d)(1) states, "Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment."

California Scenic Highway Program. The California Scenic Highway Program was established by the Legislature as Article 2.5 (commencing with section 260) of the Streets and Highways Code. Its purpose is to protect and enhance the natural scenic beauty of California highways and adjacent corridors, through special conservation treatment.

Section 263 of the Streets and Highways Code, the "State Scenic Highway System List" provides a list of highways that have been either officially designated or are eligible for designation as a State scenic highway. Review of the list shows the project site is not along a designated state scenic highway.

Local

City of San José General Plan. *Envision San José 2040 General Plan* (General Plan) identifies the General Plan designations, and land use goals and policies of real property within the City of San José. The General Plan shows the project site land use designation Transit Employment Center (TEC).

"This designation is applied to areas planned for intensive job growth because of their importance as employment districts to the City and high degree of access to transit and other facilities and services. To support San José's growth as a Regional Employment Center, it is useful to designate such key Employment Centers along the light rail corridor in North San José, in proximity to the BART and light rail facilities in the Berryessa/Milpitas area, and in proximity to light rail in the Old Edenvale area. All of these areas fall within identified Growth Areas and have access to transit and other important infrastructure to support their intensification. Uses allowed in the Industrial Park designation are appropriate in the Transit Employment Center designation, as are supportive commercial uses. The North San José Transit Employment Center also allows limited residential uses, while other Employment Centers should only be developed with industrial and commercial uses." (San José 2020, Chapter 5, pg. 9) The maximum floor area ratio (FAR) is 12.0 (4 to 25 stories).

Scenic Route Gateways

"The City of San José has many scenic resources which include the broad sweep of the Santa Clara Valley, the hills and mountains which frame the Valley floor, the baylands and the urban skyline itself, particularly high-rise development. It is important to preserve public thoroughfares which provide visual access to these scenic resources. The designation of a scenic route applies to routes which afford especially aesthetic views.

Gateways are locations which announce to a visitor or resident that they are entering the city, or a unique neighborhood. San José has a number of Gateway locations including Coleman Avenue at Interstate 880, 13th Street at US 101, and Highway 101 in the vicinity of the Highway 85 Interchange." (San José 2020, Chapter 4, pg. 25) Review of the General Plan Scenic Corridors Diagram dated June 6, 2016, shows the project site not being along a designated Gateway.

Community Design Policies

Community Design Policies address attractiveness, function, connections, compatibility, and the community health, safety, and wellness aspects of all new development in San José. Community Design (CD) Policies pertaining to aesthetics relevant to the project include:

- CD-1.1: Require the highest standards of architecture and site design, and apply strong design controls for all development projects, both public and private, for the enhancement and development of community character and for the proper transition between areas with different types of land uses.
- CD-1.7: Require developers to provide pedestrian amenities, such as trees, lighting, recycling and refuse containers, seating, awnings, art, or other amenities, in pedestrian areas along project frontages. When funding is available, install pedestrian amenities in public rights-of-ways.
- CD-1.8: Create an attractive street presence with pedestrian-scaled building and landscape elements that provide an engaging, safe, and diverse walking environment. Encourage compact, urban design, including use of smaller building footprints, to promote pedestrian activity through the City.
- CD-1.11: To create a more pleasing pedestrian-oriented environment, for new building frontages, include design elements with a human scale, varied and articulated facades using a variety of materials, and entries oriented to public sidewalks or pedestrian pathways. Provide windows or entries along sidewalks and pathways; avoid blank walls that do not enhance the pedestrian experience. Encourage inviting, transparent facades for ground-floor commercial spaces that attract customers by revealing active uses and merchandise displays.
- CD-1.18: Encourage the placement of loading docks and other utility uses within parking structures or at other locations that minimize their visibility and reduce their potential to detract from pedestrian activity.
- CD-1.23: Further the Community Forest Goals and Policies in this Plan by requiring new development to plant and maintain trees at appropriate locations on private property and along public street frontages. Use trees to help soften the appearance of the built environment, help provide transitions between land uses, and shade pedestrian and bicycle areas.
- CD-1.27: When approving new construction, require the undergrounding of distribution utility lines serving the development. Encourage programs for undergrounding existing overhead distribution lines. Overhead lines providing electrical power to light rail transit vehicles and high-tension electrical transmission lines are exempt from this policy.
- CD-4.9: For development subject to design review, ensure the design of new or remodeled structures is consistent or complementary with the surrounding neighborhood fabric (including but not limited to prevalent building scale, building materials, and orientation of structures to the street).

- CD-10.2: Require that new public and private development adjacent to Gateways, freeways (including United States (US) 101, I-880, I-680, I-280, State Route (SR) 17, SR 85, SR 237, and SR 87, and Grand Boulevards consist of high-quality architecture, use high-quality materials, and contribute to a positive image of San José.
- CD-10.3: Require that development visible from freeways (including US 101, I-880, I-680, I-280, SR 17, SR 85, SR 237, and SR 87) be designed to preserve and enhance attractive natural and man-made vistas.

City of San José Code of Ordinances. The San José Land Use Zoning shows the project site within the Industrial Park (IP) zoning designation.

"The industrial park zoning designation is an exclusive designation intended for a wide variety of industrial users such as research and development, manufacturing, assembly, testing, and offices. Industrial uses are consistent with this designation insofar as any functional or operational characteristics of a hazardous or nuisance nature can be mitigated through design controls. Areas exclusively for industrial uses may contain a very limited amount of supportive commercial uses, in addition to industrial uses, when those uses are of a scale and design providing support only to the needs of businesses and their employees in the immediate industrial area. These commercial uses should be located within a larger industrially utilized building to protect the character of the area and maintain land use compatibility. In addition, warehouse retail uses are allowed where they are compatible with adjacent industrial uses and will not constrain future use of the subject site for industrial purposes." (San José 2022a, section 20.50.010. C, 3) A data center is listed as a "special" use allowed in the zone designation upon issuance of a Special Use Permit. (San José 2022a, section 20.50.100E)

Staff reviewed the following zoning requirements that have some relation to aesthetics specific to governing scenic quality in accordance with Public Resources Code section 21071 applicable to the project site as currently zoned. Section 21071, zoning and other regulations are discussed under subsection "4.1.2 Environmental Impacts."

- The IP zoning designation maximum building height is 50 feet. (San José 2022a, section 20.50.200)
- The IP zoning designation requires landscaping on the project site and its maintenance. All setback areas, exclusive of permitted off-street parking areas and private egress, or circulation, shall be landscaped. (San José 2022a, section 20.50.260)

  "Landscape guidelines are contained in the landscape and irrigation guidelines, adopted by the city council, October 1989, Revised March 1993, the general plan, as amended, the riparian corridor policy study, approved by the city council, May 17, 1997, the current Guidance Manual on Selection of Stormwater Quality Control Measures, prepared for the Department of Planning, Building, and Code Enforcement, and the current Post-Construction Urban Runoff Management Policy approved by the city council." (San José 2022a, section 20.50.260)

- The IP zoning designation states light fixture heights should not exceed eight feet when adjacent to residential uses unless the setback of the fixture from the property line is twice the height of the fixture. Ground mounted light fixtures shall not exceed twenty-five feet in height. Any lighting located adjacent to riparian areas shall be directed downward and away from riparian areas. (San José 2022a, section 20.50.250)

As recommended by City of San José staff, the applicant has applied for a change of zone with a planned development overlay on the project site to change the current zoning IP to Transit Employment Center (Planned Development) (TEC[PD]).

"The TEC Transit Employment Center zoning designation is intended for intensive industrial park and supportive commercial uses with development generally at least four stories in height, consistent with General Plan height policies, and in proximity to existing or planned transit in employment districts designated as growth areas in the General Plan.

The TEC designation is suitable for development with retail and service commercial uses on the first two floors; with office, research and development or industrial use on upper floors; as well as wholly office, research and development, or other industrial park uses on all floors.

An important difference between this designation and the IP Industrial Park designation is that the site design for development in the TEC Transit Employment Center District should support more intensive, transit-oriented uses than that typically found in the IP Industrial Park District. The development of large hotels of at least two hundred rooms and four or more stories in height is also supported within the Transit Employment Center zoning designation.

New development should orient buildings towards public streets and transit facilities and include features to provide an enhanced pedestrian environment." (San José 2021, section 20.50.010) A data center is shown as a "special" use in this zoning district.

Pursuant to section 20.60.040 of the Zoning Code, the development regulations in a Planned Development (PD) district overlay are listed below.

"A. Except where a planned development permit has been implemented, the regulations for development, signs, off-street parking and off-street loading applicable to its base district zoning shall apply to all property located in territory in the planned development district.

B. When a PD permit has been implemented, the provisions of such permit shall prevail over the regulations applicable to the base district zoning of the property. No structure, facility, improvement or sign of any kind shall be constructed upon such property except in strict compliance with all provisions of such PD permit. In particular:

1. No structure, facility, improvement or sign shall be constructed upon such property except the particular structures, facilities, improvements, and signs specified in such permit.

2. Each structure, facility, improvement or sign shall have the exact height, floor area, and dimensions specified for it in such permit.

3. Each structure or facility used for off-street parking and off-street loading shall have the exact number of off-street parking and off-street loading spaces, and other areas, specified for it in such permit.

4. Each structure, facility, improvement or sign shall be constructed at the particular location and cover the exact surface area designated for it in such permit.

5. Each structure, facility, improvement and sign shall be constructed and maintained in strict compliance with all conditions of the PD permit." (San José 2021, section 20.60.040)

Staff reviewed the applicant's following submittals to the city: File No. PT22-002 (vesting tentative map), File No. PDC22-001 (planned development permit), and File No. PD22-001 (development standards). (DayZenLLC 2022k, DayZenLLC 2022n) In addition staff reviewed Supplemental Response to Data Request 73, it includes the applicant's most recent revisions to their submittal to the City of San José for their proposed TEC(PD) development standards. (DayZenLLC 2022x)

Site Development Permit. The purposes of a Site Development Permit are the following:

"A. ... to promote orderly development, to enhance the character, stability, integrity and appearance of neighborhoods and zoning districts, to maintain and protect the stability and integrity of land values, and to secure the general purposes of the Zoning Code and the General Plan.

B. In order to accomplish the purpose, it is necessary for the city to review and regulate the aesthetic and functional aspects of structures and sites to require, as the city determines necessary, the aesthetic and functional improvements to the site and to any structures thereon and to require offsite improvements." (San José 2022, section 20.100.600). "A valid site development permit, issued under this part, is required prior to the issuance of any building permit or installation permit ..." (San José 2022a, section 20.100.610)

Industrial Design Guidelines. The Industrial Design Guidelines adopted by the San José City Council on August 25, 1992 provide guidelines to address issues of area compatibility, project function, and aesthetics. The Guidelines provide minimum design standards applied to various land uses, development types, and locations, and facilitate an efficient review process by the city on industrial development. "Because creativity is always encouraged, deviation from guidelines may be appropriate, particularly when deviation results in a higher quality design and project." (San José 1992)

City of San José Council Policy Number. 4-3 – Outdoor Lighting On Private Developments. The "City Council, on March 1, 1983, approved Resolution No. 56286 adopting as the City policy the requirement that low-pressure sodium illumination be used in the outdoor areas of new private developments....

The purpose of this policy is to promote energy-efficient outdoor lighting on private development in the City of San José that provides adequate light for nighttime activities while benefiting the continued enjoyment of the night sky and continuing operation of the Lick Observatory by reducing light pollution and sky glow." (San José 2000) Lick Observatory is on the summit of Mt. Hamilton in the Diablo Range east of San José.

City of San José Interim Lighting Policy Broad Spectrum Lighting (LED) for Private Development. The city adopted this interim lighting policy to encourage the use of broad-spectrum lighting such as LED (light-emitting diode) for private streets, parking areas, and pedestrian areas as an alternative to the use of low-pressure sodium illumination.

A Permit Adjustment can be issued allowing an exception to the City of San José Council Policy Number. 4-3 – Outdoor Lighting On Private Developments requirement for low-pressure sodium illumination. A Permit Adjustment requires submittal of an outdoor lighting plan that includes illumination levels, backlight, up light and glare, correlated color temperature, and dimming. (San José 2022b)

4.1.2 Environmental Impacts

a. Would the project have a substantial adverse effect on a scenic vista?

Neither CEQA nor the CEQA Guidelines provide a clear-cut definition of what constitutes a scenic vista. Lead agencies may look to local planning thresholds for guidance when defining the visual impact standard for the purposes of CEQA.[3] A general plan, specific plan, zoning, or other planning document may provide guidance.

Construction and Operation

Less Than Significant Impact. The construction and operation of the project would not have a substantial adverse effect on a scenic vista.

Review of the General Plan Scenic Corridors Diagram dated June 6, 2016, shows the project site not being in a designated Gateway.

In addition, this analysis used as the definition for a scenic vista "a distant view of high pictorial quality perceived through and along a corridor or opening." The California Energy Commission in its decisions for a number of thermal power plant projects used this

3 Mira Mar Mobile Community v. City of Oceanside (2004) 119 Cal. App. 4th 477.

definition.[4] Staff review of aerial and street view imagery (Google Earth, Google Maps), and site photographs concluded the project would be located on a relatively unenclosed plain, the Santa Clara Valley floor, and not within a scenic vista as defined.

The seldom-seen zone is viewed in less detail by the observer where most visual affects blend with the landscape because of distance (BLM 1986). From the project site, the hills and mountains that frame the Santa Clara Valley floor would be in the seldom-seen zone.

b. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Neither CEQA nor the CEQA Guidelines provide a clear-cut definition of what constitutes a scenic resource. A scenic resource as presented in the above question may be explained as a widely recognized natural or man-made feature tangible in the landscape (e.g., a scenic resource designated in an adopted federal, state, or local government document, plan, or regulation, a landmark, or a cultural resource [historic values however differ from aesthetic or scenic values]). This analysis evaluated if the project would substantially damage—eliminate or obstruct—the public view[5] of a scenic resource. Also, is the project situated so that it changes the visual aspect of a scenic resource by being different or in sharp contrast?

Construction and Operation

Less Than Significant Impact. The construction and operation of the project would not substantially damage a scenic resource.

Review of the General Plan, and aerial and street view imagery concluded there is no recognized scenic resource on the site or in the vicinity that would have a public view of the project. A three-mile[6] distance zone surrounding the project was used in the identification and evaluation of scenic resources. In this urban area there are existing aboveground buildings, structures, earthworks, equipment, trees, and vegetation, etc., that would block or limit the public view of the project. The project from the baylands is about five miles to the northwest, and to the downtown San José high-rise skyline four

4 California Energy Commission Final Decision for GWF Tracy Combined Cycle Power Plant Project Docket Number 08-AFC-7, Visual Resources, pg. 321; California Energy Commission Decision for Mariposa Energy Project Docket Number 09-AFC-3, Visual Resources, pg. 5; California Energy Commission Decision for Blythe Solar Power Project Docket Number 09-AFC-6, Visual Resources, pg. 514; California Energy Commission Decision for Genesis Solar Energy Project Docket Number 09-AFC-8, Visual Resources, pg. 7-8; California Energy Commission Decision for Pio Pico Energy Center Docket Number 11-AFC-01, Visual Resources, pg. 8.5-4.

5 A public view can be defined as the visible area from a location where the public has a legal and physical right of access to real property (e.g., city sidewalk, public park, town square, state highway). CEQA Guidelines Appendix G Environmental Checklist Form, I. Aesthetics, c. states "Public views are those that are experienced from publicly accessible vantage point."

6 "Based on the curve of the Earth: Standing on a flat surface with your eyes about 5 feet off the ground, the farthest edge that you can see is about 3 miles away." (Health Line 2019)

and a half miles south. From the hills and mountains, the project would not be noticeable, or it would only be visible after extended close viewing.

c. Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Public Resources Code section 21071 defines an "urbanized area."[7] The City of San José is an incorporated city with a population greater than 100,000 which constitutes an urbanized area. Information from the U.S. Census Bureau shows the City of San José population 1,013,240 (Census 2020). As a result, the project was reviewed for conformance with zoning and other regulations governing scenic quality.

In accordance with Public Resource Code section 21099, the project is an employment center project located on an infill site within a transit priority area. A transit priority area is an area within a half mile (2,640 feet) of a major transit stop. Staff using Google Earth estimated the Milpitas BART Station, a transit depot, to be within an approximate 2,400-foot radius from the project site.

Public Resources Code section 21099(d)(1) states, "Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment."

Construction and Operation

Less Than Significant Impact. The construction and operation of the project would not conflict with applicable zoning and other regulations governing scenic quality.

The project site is currently in the IP zoning designation. The IP zoning designation is an exclusive designation intended for a wide variety of industrial users such as research and development, manufacturing, assembly, testing, and offices. (San José 2022a, section 20.50.100E)

- The IP zoning has a maximum building height of 50 feet. (San José 2022a, section 20.50.200) The TEC zoning designation permits a maximum building height of 120 feet. (San José 2022a, section 20.50.200)

If the City approves the applicant's requested zone change to TEC(PD), a maximum building height of 85 feet would be permitted on the project site. (DayZenLLC 2022x,

7 An "urbanized area" includes "(a) An incorporated city that meets either of the following criteria: (1) Has a population of at least 100,000 persons. (2) Has a population of less than 100,000 persons if the population of that city and not more than two contiguous incorporated cities combined equals at least 100,000 persons." (Public Resources Code section 21071)

Table LU DR-73) The height of the AMB would be approximately 83 feet. The administrative section of the data center buildings would be approximately 80 feet in height to the top of parapet and approximately 67.5 feet for the remaining data center. The mechanical equipment screen on the roof of the building would extend to 78 feet in height from the top of the slab above the data halls to the top of the parapet. The roof of the parking garage would be approximately 63 feet in height. (DayZenLLC 2022y, Elevation Drawings)

The project includes an onsite substation that would be served by an above ground 115-kV transmission line. The transmission line would be a 0.25-mile extension of the Newark-Milpitas #2 115-kV line. The extension would come in overhead along Trade Zone Boulevard. The transmission circuit would feed two substation transformers overhead. The 115-kV transmission line pole configuration would be single tubular steel poles between 70 and 130 feet tall. It is possible that three or more existing poles along the transmission line route may need to be replaced. The transmission line would exit the site underground (out of public view) into the Trade Zone Boulevard right of way.

In accordance with the city code, communications towers, monopoles, net poles, and other structures, the maximum allowable height is 150 feet on sites with nonresidential or nonurban land use designations, and up to 160 feet on sites with an existing Pacific Gas and Electric Company (PG&E) substation or high-tension line corridor exceeding 200-kV, or the maximum allowable building height for the subject property established elsewhere in Title 20 of the city code (San José 2022a, section 20.85.030).

A few purposes of a height limit include to preserve a scenic vista, protect the public view of a scenic resource (e.g., architectural structure, a landmark, natural feature), and to maintain the character of a site and surrounding area (e.g., residential or commercial area). As previously discussed, review of aerial, surface, and street imagery shows the project's buildings and structures are not within a scenic vista, would not block the public view of a scenic resource, and elevations submitted show the project's building and structure heights would be concordant with heights of buildings and structures on adjacent properties and in the surrounding area.

- The IP, TEC, and proposed TEC(PD) zoning designation requires landscaping on the project site and its maintenance. (San José 2022a, section 20.50.260, DayZenLLC 2022x)

The applicant is showing landscaping on the project site. As shown on the conceptual landscape plan(s), notes, and details in File No. PD22-001, landscaping consisting of trees, large and medium shrubs, vines, and groundcovers would be installed on the property (DayZenLLC 2021l, DayZenLLC 2022m).

- The City of San José has a tree removal control ordinance. A tree removal permit is required from the city prior to the removal of any trees onsite. Prior to the issuance of a tree removal permit, the city requires that a formal tree survey be conducted, which indicates the number, species, trunk circumference, and location of all trees that would be removed or impacted by the project. (San José 2022a, Chapter 13.32)

The applicant has provided a preliminary arborist report (DayZenLLC 2021a, DayZenLLC 2021d). The project proposes to remove 156 trees. The removed trees would be mitigated through a combination of planting new onsite trees per the city's prescribed replacement ratios for native, non-native and orchard trees, and paying into the City of San José in-lieu fund for new trees at select locations within the city. The project does not propose removal of trees along the transmission line route. (DayZenLLC 2021e). Refer to **Section 4.4 Biology** for further discussion.

City staff reviews and regulates the aesthetic and functional aspects of structures and sites to require, as the city determines necessary, aesthetic and functional improvements to the site and to any structures thereon through its Site Development Permit.

For the reasons above, the project would be consistent with the policies in the General Plan and conform with zoning listed in the "Regulatory Background" subsection.

The project would have 39 Caterpillar diesel generators to provide backup generation in case of an interruption in electrical supply from PG&E. Manufacturer and performance data provided by the applicant shows generator exhaust stack flow gas temperatures at a 100 percent load standby to be 902 degrees Fahrenheit for the CAT 3516E and 892.5 degrees for the CAT C32.[8] These extremely high temperatures (greater than 212 degrees Fahrenheit heating stream) would eliminate the necessary saturated moisture (vapor) rising from the generator exhaust stack that could condense in the atmosphere forming a publicly visible water vapor plume (visible plume). There is no water content in the generator's exhaust stack flow (dry air mass flow). The operation of the generators would not result in visible plumes.

d. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Light pollution is the "inappropriate or excessive use of artificial light...." (IDA 2021) Light pollution "occurs when outdoor lighting is misdirected, misplaced, unshielded, excessive or unnecessary. As a result, light spills unnecessarily upward and outward, causing glare, light trespass, and a nighttime urban 'sky glow' overhead, indicating wasted energy and obscuring the stars overhead." (DSS 2017)

The International Dark-Sky Association (IDA) is the authoritative voice on light pollution. IDA recognizes to minimize the harmful effects of light pollution, lighting should: only be on when needed; only light the area that needs it; be no brighter than necessary; minimize blue light emissions;[9] and be fully shielded.

"Reflectivity is defined as the property of a material to reflect the light or radiation. It is a measurement of reflectance irrespective of the thickness of a material." (Electrical4U 2020) Materials and coatings that diffuse illumination or collection, reflectance and scattering are of utmost importance. A few examples of materials and surfaces that

8 Appendix AQ-1 Engine Emissions Data (DayZenLLC 2021e)

9 Studies show exposure to blue light can cause eye strain, fatigue, headaches, and sleeplessness.

should be avoided if possible: any material with a reflectance greater than 35 percent; any shiny, highly reflective materials even for small surfaces; large smooth surfaces; and large expanses of glass. Material with a non-shiny, textured or matt/powder finish are preferable to flossy or shiny finishes. "An ideal coating is non-specular (to decrease geometrical effects) durable, high in reflectance and spectrally flat over a wide wavelength range to give a flat spectral response in input or output." (Labsphere 2020)

Construction and Operation

Less Than Significant Impact. The construction and operation of the project would not create a new source of substantial light, glare, or reflectivity adversely affecting day or nighttime views in the area.

- The City of San José requires light fixture heights to not exceed eight feet when adjacent to residential uses unless the setback of the fixture from the property line is twice the height of the fixture. No ground mounted light fixture shall exceed twenty-five feet in height. (San José 2022a, section 20.50.250)

The project includes outdoor lighting for driveways, entrances, walkways, parking areas, and security purposes. The project site does not border a residential use. Outdoor lighting would be angled downward onsite and include light visors, light hoods, and utilize lighting controls to reduce energy usage. LED lighting fixtures would be installed throughout the project site.

Exterior surfaces of the project would consist primarily of gray colored precast concrete panels, glass curtain walls, pre-manufactured dark, medium, and light gray colored EIFS (Exterior Insulation and Finish System) layers, wood and light gray colored metal panels. (DayZenLLC 2022y – Elevation Drawings) The project's exterior surfaces and finishes, the coatings, colors, materials, and textures as described and shown on the elevation drawings would significantly reduce reflectivity.

The construction laydown and staging areas may have nighttime lighting for security purposes. Outdoor construction-related lighting would be directed onsite and away from surrounding properties.

In addition, the Site Development Permit review by city staff would ensure project lighting is in conformance with City of San José Council Policy 4-3 - Outdoor Lighting On Private Developments, and the Interim Lighting Policy Broad Spectrum Lighting (LED) for Private Development.

4.1.3 Mitigation Measures

None required.

4.1.4 References

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4.2 Agriculture and Forestry Resources

This section describes the environmental setting, regulatory background, and impacts associated with construction and operation of the project with respect to agriculture and forestry resources.

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

Environmental checklist established by CEQA Guidelines, Appendix G.

4.2.1 Environmental Setting

The project site, consisting of two parcels, is currently developed with two buildings, hardscape, and ornamental landscaping. The site is located in an urban area surrounded by office, commercial, residential, public, and industrial uses. There are no existing agricultural or forest lands in the area.

Regulatory Background

Federal

No federal regulations relating to agriculture and forestry resources apply to the proposed project.

State

Farmland Mapping and Monitoring Program. The California Department of Conservation (CDOC) established the Farmland Mapping and Monitoring Program (FMMP) in 1982, pursuant to statute, to assess the location, quantity, and quality of agricultural lands and conversion of those lands to other uses. The FMMP identifies and maps agricultural lands as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land.

The current (2018) Santa Clara County Important Farmland Map shows that the project site is classified as Urban and Built-up Land, which is a non-agricultural designation (CDOC 2022a). Urban and built-up land is defined as: "Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes" (CDOC 2022b).

Williamson Act. The California Land Conservation Act of 1965 (Gov. Code, § 51200 et seq.), or Williamson Act, is the principal method for encouraging the preservation of agricultural lands in California. It enables local governments to enter into contracts with private landowners who agree to maintain specified parcels of land in agricultural or related open space use in exchange for tax benefits. The project parcels are not Williamson Act parcels.

Local

City of San José General Plan. The *Envision San José 2040 General Plan* (General Plan) land use designation is Transit Employment Center. The City of San José General Plan defines the Transit Employment Center designation as "areas planned for intense job growth because of their importance as employment districts to the City and high degree of access to transit and other facilities and services" (San José 2022a).

City of San José Municipal Code. The City of San José's zoning designation for the project site is Industrial Park. The Industrial Park zoning designation is "an exclusive designation intended for a wide variety of industrial uses such as research and development, manufacturing, assembly, testing, and offices" (San José 2022b).

4.2.2 Environmental Impacts

a. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as Shown on the Maps Prepared Pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to Non-agricultural use?

Construction and Operation

No Impact. The project site is classified as "Urban and Built-up Land" on the current (2018) Santa Clara County Important Farmland Map (CDOC 2022a). The vast majority of land surrounding the project site is also defined as Urban and Built-up Land.

Because the site is classified as "Urban and Built-up Land," the proposed project would not convert Farmland to a non-agricultural use. Construction and operation activities would cause no impacts related to Farmland conversion.

b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

Construction and Operation

No Impact. Both project parcels are zoned Industrial Park, which is not an agricultural zoning district. The adjacent areas are also zoned for urban uses, not agriculture. Furthermore, the project parcels are not under a Williamson Act contract. Therefore, the proposed project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and no impact would occur.

c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

Construction and Operation

No Impact. Both project parcels are zoned Industrial Park, and no land in the area is zoned for forest land, timberland, or timberland production; therefore, project construction and operation would cause no impacts to the zoning or uses of forest land, timberland, or timberland production lands.

d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?

Construction and Operation

No Impact. The project site does not contain forest land and is not in a region where forest land is present; therefore, project construction and operation would cause no loss of forest land, and no impact would occur.

e. Would the project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

Construction and Operation

No Impact. Project construction and operation would occur in an urbanized area and would cause no changes in the existing environment that would cause conversion of farmland to a non-agricultural use or forest land to a non-forest use. Therefore, no environmental impact would occur.

4.2.3 Mitigation Measures

None required.

4.2.4 References

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4.3 Air Quality

This section describes the environmental setting and regulatory background and discusses impacts specific to air quality associated with the demolition/construction, readiness testing and maintenance, and the potential for emergency operation of the SVY Data Center (SVYDC) and the associated SVY Backup Generating Facility (SVYBGF), known together as the project. It is important to note that intermittent and standby emitting sources, like those proposed in this project, may operate for emergency use, and such emergency operations would be infrequent and for unplanned circumstances, which are beyond the control of the project owner. Emergency operations and the impacts of air pollutants during emergencies are generally exempt from air district offsetting and modeling requirements. Emissions from emergency operations are not regular, expected, or easily quantifiable such that they cannot be modeled or predicted with certainty.

AIR QUALITY Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard?	☐	☒	☐	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Environmental checklist established by CEQA Guidelines, Appendix G.

4.3.1 Summary

In this analysis, CEC staff (staff) concludes that, with the implementation of mitigation measure **AQ-1** and oxides of nitrogen (NOx) emissions fully offset through the permitting process with Bay Area Air Quality Management District (BAAQMD), the project would not have a significant impact on air quality. Staff analyzes two primary types of air emissions: (1) criteria pollutants, which have health-based ambient air quality standards (AAQS); and (2) toxic air contaminants (TACs), which are identified as potentially harmful even at low levels and have no established safe levels or health-based AAQS. The project would be constructed in two phases, with Phase I including demolition, grading, the installation of utility services, the construction of an on-site substation, the construction of the advanced manufacturing building (AMB), Data Center Building SVY05, and parking

structure, and the placement of 17 of the gensets. Phase II will include construction of Data Center Building SVY06 and the placement of the remaining 22 gensets. Staff analyzes the project's impacts on air quality during demolition/construction, routine operation, and the potential for emergency operation of the emergency backup generators (gensets). Staff also analyzes the potential cumulative effects of the project on air quality.

4.3.1.1 Significance Criteria

This air quality evaluation assesses the degree to which the project would potentially cause a significant impact according to the California Environmental Quality Act (CEQA) guidelines. BAAQMD is the local air district responsible for the attainment and maintenance of the federal and state AAQS and associated program requirements at the project location. The analysis is based upon the methodologies and related thresholds of significance in BAAQMD's May 2017 CEQA Air Quality Guidelines (BAAQMD 2017b) to determine the significance of the potential air quality emissions and impacts. These methodologies include qualitative determinations and the quantification of whether project construction or operation would exceed numeric emissions and health risk thresholds (BAAQMD 2017b).

BAAQMD CEQA Guidelines project-level thresholds of significance ("BAAQMD significance thresholds") for criteria pollutants and precursor pollutants and the health risks of TACs that apply during construction and operation are shown in **Table 4.3-1**. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the Bay Area region's existing air quality conditions. Staff evaluates project emissions against the BAAQMD significance thresholds under environmental checklist criterion "b."

For fugitive dust emissions during construction periods, the BAAQMD CEQA Guidelines do not have a significance threshold. Rather, BAAQMD recommends using a current Best Management Practices (BMPs) approach, which has been a pragmatic and effective approach to the control of fugitive dust emissions.

Staff also evaluates the project's potential to expose sensitive receptors to substantial pollutant concentrations under environmental checklist criterion "c." Staff addresses both the ambient air quality impacts of criteria pollutants, which have health-based standards, and the impacts of TACs, which are identified as potentially harmful even at low levels and have no established safe levels or health-based ambient air quality standards.

The analysis includes ambient air quality impact modeling for demolition/construction and operation, which consists of readiness testing and maintenance, of the proposed diesel-fueled gensets to estimate the air quality impacts caused by the emissions. The AAQS, shown in **Table 4.3-2**, are health protective values, so staff uses these health-based regulatory standards to help define what is considered a substantial pollutant

concentration for criteria pollutants.[1] Staff's analysis determines whether the project would be likely to exceed any AAQS or contribute substantially to an existing or projected air quality violation, and, if necessary, proposes mitigation to reduce or eliminate these pollutant exceedances or substantial contributions.

TABLE 4.3-1 BAAQMD THRESHOLDS OF SIGNIFICANCE

Pollutant	Construction	Operation	
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Maximum Annual Emissions (tpy)
ROG	54	54	10
NOx	54	54	10
PM10	82 (exhaust)	82	15
PM2.5	54 (exhaust)	54	10
PM10/ PM2.5 (fugitive dust)	Best Management Practices	None	
Local CO	None	9.0 ppm (8-hour average), 20.0 ppm (1-hour average)	
Risk and Hazards for New Sources and Receptors (Individual Project)	Same as Operation Threshold	Compliance with Qualified Community Risk Reduction Plan OR Increased cancer risk of >10.0 in a million Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient PM2.5 increase: > 0.3 µg/m^3 annual average Zone of Influence: 1,000-foot radius from property line of source or receptor	
Risk and Hazards for New Sources and Receptors (Cumulative Threshold)	Same as Operation Threshold	Compliance with Qualified Community Risk Reduction Plan OR Cancer: > 100 in a million (from all local sources) Non-cancer: > 10.0 Hazard Index (from all local sources) (Chronic) PM2.5: > 0.8 µg/m^3 annual average (from all local sources) Zone of Influence: 1,000-foot radius from property line of source or receptor	

Source: BAAQMD 2017b, Table 2-1

Significance criteria also include Significant Impact Levels (SILs) for the particulate matter portions of the analysis. Regulatory agencies have traditionally applied SILs as a de minimis value, which represents the off-site concentration predicted to result from a source's emissions that does not warrant additional analysis or mitigation. If a source's modeled impacts at any off-site location do not exceed relevant SILs, the source owner

1 This approach provides a complete analysis that describes the foreseeable effects of the project in relation to all potential air quality related health impacts, including impacts of criteria pollutants to sensitive receptors; and therefore, addresses the California Supreme Court December 2018 *Sierra Club v. County of Fresno* opinion (https://www.courts.ca.gov/opinions/archive/S219783A.PDF).

would typically not need to assess multi-source or cumulative air quality modeling to determine whether or not that source's emissions would cause or contribute to a violation of the relevant National Ambient Air Quality Standard (NAAQS) or California Ambient Air Quality Standard (CAAQS). In the project's vicinity, based on data from the local San Jose-Jackson Street air quality monitoring station about 3.5 miles south of the project site, shown in **Table 4.3-4**, the background levels of particulate matter of 10 micrometers or less in diameter (PM10) and particulate matter of 2.5 micrometers and smaller in diameter (PM2.5) already exceed the 24-hour and annual AAQS even before accounting for the project's emissions. Staff compares the project's contribution to local criteria pollutant concentrations to SILs to determine whether the project's emissions would contribute significantly to those exceedances.

BAAQMD does not have significance criteria in terms of PM10 concentrations or 24-hour concentrations of PM2.5. To determine if the project could contribute substantially to the existing PM10 exceedances, this analysis relies on the United States Environmental Protection Agency (U.S. EPA) PM10 SILs established in federal regulations for non-attainment areas (40 CFR 51.165(b)(2)) for 24-hour impacts (5 $\mu g/m^3$) and for annual impacts (1 $\mu g/m^3$). The same federal regulation (40 CFR 51.165(b)(2)) also established the U.S. EPA PM2.5 SILs concentrations for 24-hour impacts (1.2 $\mu g/m^3$) and for annual impacts (0.3 $\mu g/m^3$).

- The BAAQMD significance threshold for a project-level increase in annual PM2.5 concentrations is also 0.3 micrograms per cubic meter ($\mu g/m^3$), as shown in **Table 4.3-1**. However, in April 2018, the U.S. EPA issued *Guidance on Significant Impact Levels for Ozone and Fine Particles in the Prevention of Significant Deterioration Permitting Program* (U.S. EPA 2018a), which recommends PM2.5 SILs levels for 24-hour impacts to be 1.2 $\mu g/m^3$ (as in [40 CFR 51.165(b)(2)]) and for annual impacts to be 0.2 $\mu g/m^3$ (lower than 0.3 $\mu g/m^3$). Note that the U.S. EPA SILs values are all based on the forms of the applicable NAAQS. For example, the 24-hour PM2.5 SILs of 1.2 $\mu g/m^3$ is based on the 98th percentile 24-hour concentrations averaged over three years. The annual PM2.5 SILs of 0.2 $\mu g/m^3$ is based on a three-year average of annual average concentrations. For this analysis, staff uses the U.S. EPA SILs as well as the BAAQMD CEQA Guidelines significance threshold to determine project impact significance of PM2.5 concentrations.

The health risks from the project's TAC emissions are compared with the BAAQMD significance thresholds for a single source. If risks to the maximally exposed sensitive receptors are below significance thresholds, then impacts to other receptors would also be below significance thresholds. Cumulative health risk assessment (HRA) results are also compared with the BAAQMD significance thresholds for cumulative risk and hazards. For HRA purposes, TACs are separated into carcinogens and non-carcinogens based on the nature of the physiological effects associated with exposure to the pollutant. Therefore, there are two kinds of thresholds for TACs: cancer risk and non-cancer risk. Cancer risk is expressed as excess cancer cases per one million exposed individuals, typically over a lifetime of exposure. Acute and chronic exposure to non-carcinogens is

expressed as a hazard index (HI), which is the ratio of expected exposure levels to acceptable reference exposure levels (REL) for each of the TACs with acute and chronic health effects. The significance thresholds for TACs and PM2.5 are listed in **Table 4.3-1** and summarized in the following text (BAAQMD 2017b).

The BAAQMD significance thresholds for a single source are as follows:

- An excess lifetime cancer risk level of more than 10 in one million.
- A non-cancer chronic HI greater than 1.0.
- A non-cancer acute HI greater than 1.0.
- An incremental increase in the annual average PM2.5 concentration of greater than 0.3 µg/m^3.

The BAAQMD CEQA Guidelines significance thresholds for cumulative impacts are also summarized below. A project would have a cumulatively considerable impact if the aggregate total of all past, present, and foreseeable future sources within a 1,000-foot distance from the fenceline of a source and the contribution from the project, exceeds the following:

- An excess lifetime cancer risk level of more than 100 in one million.
- A non-cancer chronic HI greater than 10.0.
- An annual average PM2.5 concentration of greater than 0.8 µg/m^3.

Additionally, if a project would not exceed the BAAQMD significance thresholds discussed above, then a project would also be consistent with and not have any impact on BAAQMD's Bay Area 2017 Clean Air Plan. This plan provides a regional strategy to protect public health and the climate, and it defines an integrated, multipollutant control strategy to reduce emissions of particulate matter, TACs, ozone and key ozone precursors, and greenhouse gases (GHG). The environmental checklist criterion "a" in this air quality analysis addresses the consistency of the project with BAAQMD's Bay Area 2017 Clean Air Plan.

4.3.1.2 Criteria Pollutants (including Fugitive Dust)

i. Construction

Under environmental checklist criterion "b," staff explains that construction-phase emissions are a result of construction equipment, material movement, paving activities, and on-site and off-site vehicle trips, such as material haul trucks, worker commutes, and delivery vehicles. The project would be constructed in two phases, with Phase I including demolition, grading, the installation of utility services, the construction of an on-site substation, the construction of the advanced manufacturing building (AMB), Data Center Building SVY05, and parking structure, and the placement of 17 of the gensets. Phase II

would include the construction of Data Center Building SVY06 and the placement of the remaining 22 gensets. Project construction would occur for approximately 32 months.

As shown in **Table 4.3-5**, the project's average daily criteria pollutant emissions during construction would be lower than the relevant numeric BAAQMD significance thresholds. There is no numerical threshold for fugitive dust generated during construction. The BAAQMD CEQA Guidelines recommend the control of fugitive dust through BMPs to conclude that impacts from fugitive dust emissions are less than significant (BAAQMD 2017b). Staff recommends **AQ-1**, which incorporates the project applicant's proposed measures that would include BAAQMD's recommended construction BMPs. With the implementation of **AQ-1**, the fugitive dust impacts from construction would be less than significant.

Under environmental checklist criterion "c," staff also analyzes the localized impacts of construction criteria pollutant emissions by comparing them with the AAQS. As shown in **Table 4.3-7**, staff finds that construction emissions would not contribute to any exceedance of the AAQS, except to the preexisting exceedances of PM10 and PM2.5. For PM10 and PM2.5, the project's contributions to the concentrations of PM10 and PM2.5 at sensitive receptor locations would be below the relevant SILs. Therefore, the project would not expose sensitive receptors to substantial criteria pollutant concentrations during construction. Construction is considered short-term, and construction impacts would be further reduced with the implementation of **AQ-1**, which includes BAAQMD's recommended construction BMPs and exhaust emissions mitigation measures.

With the implementation of **AQ-1**, criteria pollutant and fugitive dust emissions from project construction would not exceed any BAAQMD CEQA Guidelines significance threshold, cause a cumulatively considerable net increase of any criteria pollutant, conflict with or obstruct any applicable regional or local air quality plan, or expose sensitive receptors to substantial criteria pollutant concentrations, and would, thus, be less than significant.

ii. Operation and Maintenance

Staff evaluates criteria pollutant emissions from operation and maintenance in two sections: (A) "routine operation" emissions including, among other things, emissions from readiness testing and maintenance of the 39 gensets; and (B) "emergency operation" emissions from using the gensets to support the electricity demand of the project.

(A) Routine Operation

Under environmental checklist criterion "b," staff concludes that criteria pollutant emissions from the project's routine operation would be less than significant with NOx emissions fully offset through the permitting process with BAAQMD. Routine operation of the project would generate criteria pollutant emissions from readiness testing and maintenance of the 39 gensets, off-site vehicle trips for worker commutes and material deliveries, and facility upkeep, such as architectural coatings, consumer product use,

landscaping, water use, waste generation, natural gas use for comfort heating, and electricity use.

As shown in **Table 4.3-6**, staff finds that the project's total annual and average daily emissions of criteria pollutants from routine operation would be below the BAAQMD CEQA Guidelines significance thresholds, except for NOx emissions. The project's gross total NOx emissions would exceed BAAQMD significance thresholds and could, therefore, contribute to a cumulatively considerable net increase of NOx emissions. However, during BAAQMD's permitting process, BAAQMD will require the applicant to fully offset its NOx emissions. With NOx emissions fully offset, the project's total net annual and average daily emissions would not exceed any of the BAAQMD significance thresholds.

The project would also emit ammonia from the urea used in the selective catalytic reduction (SCR) system. There is no BAAQMD threshold for ammonia, which is not a criteria pollutant but instead a precursor to particulate matter. Because the project's primary emissions of particulate matter are well below the BAAQMD CEQA Guidelines significance thresholds, secondary particulate matter impacts from the project's ammonia emissions of 0.29 tons per year (tpy) would be less than significant and not require additional mitigation or offsets.

Under environmental checklist criterion "c," staff also analyzes the localized impacts of the project's criteria pollutant emissions during readiness testing and maintenance of the gensets by comparing them with the AAQS. As shown in **Table 4.3-8**, staff finds that the project's routine operational emissions would not contribute to any exceedance of any AAQS, except to the preexisting exceedances of PM10 and PM2.5. However, staff finds that the project's contributions to concentrations of PM10 and PM2.5 would be below the relevant SILs, and, therefore, would not expose sensitive receptors to substantial criteria pollutant concentrations.

Staff concludes that, with NOx emissions fully offset through the BAAQMD permitting process, criteria pollutant emissions from routine operation of the project would not exceed any BAAQMD CEQA Guidelines significance threshold, cause a cumulatively considerable net increase of any criteria pollutant, conflict with or obstruct any applicable regional or local air quality plan, or expose sensitive receptors to substantial criteria pollutant concentrations, and would, thus, be less than significant.

(B) Emergency Operation

The emergency use of the gensets could occur in the event of a power outage or other disruption, upset, or instability that triggers a need for the project to use emergency backup power.

(1) Criteria Pollutant Emissions from Emergency Operation

As discussed under environmental checklist criterion "b," the BAAQMD 2019 policy, *Calculating Potential to Emit for Emergency Backup Power Generators*, requires a facility's

potential to emit (PTE) to be calculated based on emissions proportional to emergency operation for 100 hours per year per genset, in addition to the permitted limits for readiness testing and maintenance (BAAQMD 2019). After comparing the PTE calculated to determine the account eligibility threshold, the applicant would only be required to offset permitted emissions from readiness testing and maintenance and not the emissions from emergency operation. BAAQMD requires the use of offsets to counterbalance increases in regular and predictable emissions, not increases in emissions occurring infrequently when emergency conditions arise.

In addition, emissions during routine operation are conservatively estimated with the assumption of 50 hours of readiness testing and maintenance per year per engine. However, other data center project applicants previously have stated that routine testing and maintenance would rarely exceed 12 hours per year. Based on the evidence about the likelihood and duration of emergency operation, the allowance of 50 hours per engine per year likely accommodates the average annual emergency operation emissions. Thus, staff concludes that the project would be unlikely to cause a cumulatively considerable net increase of any criteria pollutant.

(2) Criteria Pollutant Impacts from Emergency Operation

As discussed in detail under subsection "Emergency Operations Impacts for Criteria Pollutants" under environmental checklist criterion "c," the air quality impacts of genset operation during emergencies are not quantified below because the impacts of emergency operations are typically not evaluated during facility permitting and local air districts do not normally conduct an air quality impact assessment of such impacts. Staff assessed the likelihood of emergency events but finds that assessing the air quality impacts of emergency operations would require a host of unvalidated, unverifiable, and speculative assumptions about when and under what circumstances such a hypothetical emergency would occur. Such a speculative analysis is not required under CEQA (CEQA Guidelines Sections 15064(d)(3) and 15145), and, most importantly, would not provide meaningful information by which to determine project impacts. If emergency operation becomes a more frequent occurrence and more data is gathered regarding when and how these facilities operate during emergency situations, this conclusion might change.

Based on informal comments from BAAQMD, staff reviewed the BAAQMD comments on the Notice of Preparations (NOP) for the CA3 Backup Generating Facility and the Gilroy Backup Generating Facility regarding the use of diesel engines for "non-testing/non-maintenance" purposes (BAAQMD 2021b, BAAQMD 2021c) and confirmed that these types of events are infrequent, irregular, and unlikely and the resulting emissions are not easily predictable or quantifiable. See more detailed discussion under subsection "Emergency Operations Impacts for Criteria Pollutants" under environmental checklist criterion "c."

iii. Cumulative Impacts

Staff concludes that the project's criteria pollutant emissions would not be cumulatively significant. BAAQMD CEQA Guidelines state that if a project's daily average or annual emissions of operational-related criteria pollutants or precursors do not exceed any BAAQMD threshold of significance, as listed in **Table 4.3-1** above, the project would not result in a cumulatively significant impact. As explained above, staff finds that all the criteria pollutant emissions would be below the BAAQMD CEQA Guidelines thresholds of significance with the implementation of **AQ-1** and NOx emissions being fully offset through the BAAQMD permitting process.

In addition, under environmental checklist criterion "c," staff performed a cumulative impacts analysis for annual PM2.5 impacts as part of a cumulative HRA. Staff concludes that the project's contribution to the annual PM2.5 concentrations would not be cumulatively significant.

Thus, staff concludes that the project's criteria pollutant emissions from the routine operation of the project would not be cumulatively significant.

4.3.1.3 Toxic Air Contaminants (TACs)

Under environmental checklist criterion "c," staff analyzes the potential impacts of the project's TAC emissions separately for construction and routine operation. Staff also analyzes the cumulative effects of the project's TAC emissions together with the impacts of other sources within 1,000 feet. Staff concludes that the individual and cumulative impacts from the project's TAC emissions would be less than significant.

Staff finds the health risks at sensitive receptor locations would be less than the BAAQMD CEQA Guidelines significance thresholds shown in **Table 4.3-1**. Staff concludes that the health risks from project construction and routine operation would be less than significant and would be further reduced with the implementation of **AQ-1**.

Staff finds that cumulative health risks at sensitive receptor locations would be less than the BAAQMD CEQA Guidelines significance thresholds shown in **Table 4.3-1**. Staff concludes that the effect of cumulative TAC emissions would be less than significant.

4.3.1.4 Background on Air Quality Evaluation

Criteria Pollutant Evaluation

California Air Resources Board (CARB) and U.S. EPA have each established federal and state AAQS for criteria pollutants. While both NAAQS and CAAQS apply to every location in California, typically the state standards are lower (i.e., more stringent) than federal standards. Air monitoring stations, usually operated by local air districts or CARB, measure the ambient air to determine an area's attainment status for NAAQS and CAAQS. Depending on the pollutant, the time over which these pollutants are measured varies from 1-hour, to 3-hours, to 8-hours, to 24-hours and to annual averages. Most criteria

pollutants have ambient standards with more than one averaging time. Pollutant concentrations are expressed in terms of mass of pollution per unit volume of air, typically using micrograms for the mass portion of the expression and cubic meters of air for the volume, or "micrograms per cubic meter of air, expressed as "$\mu g/m^3$." The concentration can also be expressed as parts of pollution per million parts of air or "ppm." AAQS appear in the subsection "4.3.2 Environmental Setting".

Some forms of air pollution are primary air pollutants, which are gases and particles directly emitted from stationary and mobile sources. Other forms of air pollution are secondary air pollutants that result from complex interactions between primary pollutants, background atmospheric constituents, and other secondary pollutants. Some pollutants can be a combination of both primary and secondary formation, such as PM2.5. In this case, the primary pollutant component of PM2.5 is directly emitted from the stack of diesel-fueled engines and the secondary pollutant component of PM2.5 is formed in the air by the transformation of gaseous NOx and sulfur oxides (SOx) into particles. In this case, the NOx and SOx emissions are precursors to the formation of the secondary aerosol pollutant.

Emissions of NOx include nitric oxide (NO) and nitrogen dioxide (NO_2). In the case of stack emissions from diesel-fueled engines, approximately 90 percent of the NOx is in the form of NO while the remainder is directly emitted NO_2. The ambient standards are expressly for NO_2, not NO. Once these gases exit the stack, chemical reactions in the region downwind of the facility, meteorological conditions, and sunlight interact to convert the NO into NO_2, ozone, and particulates. Most ozone in the ambient air is not directly emitted. Rather, it is formed in the air when the NO to NO_2 reaction occurs, followed by a set of complex reactions including interactions with volatile organic compounds (VOC). BAAQMD uses the term precursor organic compounds (POC) instead of VOC.

California is divided into 35 local air districts. Some of these local governmental agencies are called "air quality management districts," while others are called "air pollution control districts." Generally, state law designates local air districts as having primary responsibility for the control of air pollution from all sources other than mobile sources while the control of vehicular air sources is the responsibility of CARB. (Health and Safety Code, §39002) Additionally, CARB is charged with coordinating efforts to attain and maintain CAAQS and NAAQS. (Health and Safety Code, §39003) Areas that meet the AAQS, based upon air monitoring measurements made by either the local air district or CARB, are classified as "attainment areas," and areas that have monitoring data that exceed AAQS are classified as "nonattainment areas." (Health and Safety Code, §39608) Additionally, any given area can be classified as attainment for some pollutants and nonattainment for others. Even for the same pollutant, an area can be attainment for one averaging time and nonattainment for another.

Air districts adopt rules and attainment and maintenance plans aimed at protecting public health and reducing emissions. (Health and Safety Code, §40001) Air districts incorporate

these requirements into the State Implementation Plan (SIP), which CARB submits for approval to the U.S. EPA as the state's overall plan to come into attainment for federal NAAQS. (Health and Safety Code, §39602) Once a SIP is approved by the U.S. EPA and published in the Federal Register, the requirements in the SIP become federally enforceable. Consistency of the project with the applicable air quality management plan is addressed as part of environmental checklist criterion "a" in this air quality analysis.

For those facilities subject to CEC jurisdiction, the project is evaluated to determine whether it would be able to comply with all applicable local, state, and federal requirements. If the CEC is issuing the license, this analysis occurs during the review of the Application for Certification (AFC), with the local air district participating in this process by preparing a Determination of Compliance (DOC). However, since this project is going through an exemption to the AFC process under the Small Power Plant Exemption, the DOC is not prepared. If the proposed generating capacity is 50 megawatts (MW) to 100 MW, the CEC conducts a CEQA review before allowing the project to be exempt from CEC's AFC licensing. Once the CEC's jurisdictional process is approved, the local air district would then implement its permit review process and, if the proposed facility meets local air district requirements, an operating permit would be issued by that air district.

The local air district's New Source Review (NSR) program does the following: (1) defines the facility's potential-to-emit; (2) determines whether the sources would achieve minimum performance standards; (3) assesses whether the sources would achieve the Best Available Control Technology (BACT) requirements; and (4) determines whether the project would trigger offset requirements. These issues are addressed as part of environmental checklist criterion "b" in this air quality analysis.

Non-Criteria Pollutant Evaluation

Non-criteria pollutants that are typically evaluated are airborne toxic pollutants identified to have potential harmful human health impacts. Evaluations assess the potential risks from TACs and hazardous air pollutants (HAPs). TACs include toxic air pollutants identified by CARB, and HAPs include toxic air pollutants identified at the federal level. Most toxic air pollutants do not have AAQS; however, AAQS have been established for a few pollutants. Since TACs have no AAQS that specify health-based levels considered safe for everyone, a HRA is used to determine if people might be exposed to those types of pollutants at unhealthy levels.

TACs are separated into "carcinogens" and "non-carcinogens" based on the nature of the physiological effects associated with exposure. There are two types of thresholds for TACs: cancer risk and non-cancer risk. Cancer risk is expressed as excess cancer cases per 1 million exposed individuals, typically over a lifetime of exposure. Acute and chronic exposure to non-carcinogens is expressed as a HI, which is the ratio of expected exposure levels to acceptable REL for each of the TACs associated with acute and chronic health effects.

The impact evaluation of toxic pollutants focuses on the project's incremental impact due to diesel particulate matter (DPM) exhaust from construction equipment and from the stacks of the diesel-fueled gensets. That is because DPM is the primary TAC of concern. This issue is addressed as part of environmental checklist criterion "c" in this air quality analysis.

Odor Impact Evaluation

Aside from criteria pollutants and TACs, impacts may arise from other emissions, notably related to odor. This issue is addressed as part of environmental checklist criterion "d" in this air quality analysis.

4.3.2 Environmental Setting

The subject project is proposed to be located on two parcels located at 2400 Ringwood Avenue and 1849 Fortune Drive in San Jose, California. The property is bounded on the north, across Trade Zone Boulevard, by residential buildings, on the northeast by a church, on the southeast by a semiconductor design office, on the southwest by a data center and pest control business, on the west by miscellaneous office buildings, and on the east by a data center operated by STACK. Refer to **Section 3 Project Description** for further details regarding the project.

Criteria Pollutants

The U.S. EPA and the CARB have established AAQS for several pollutants based on their adverse health effects. The U.S. EPA has set NAAQS for ozone (O_3), carbon monoxide (CO), NO_2, PM10, PM2.5, sulfur dioxide (SO_2), and lead (Pb). These pollutants are commonly referred to as "criteria pollutants." Primary standards were set to protect public health; secondary standards were set to protect public welfare against visibility impairment, damage to animals, crops, vegetation, and buildings. In addition, CARB has established CAAQS for these pollutants, as well as for sulfate (SO_4), visibility reducing particles, hydrogen sulfide (H_2S), and vinyl chloride. CAAQS are generally stricter than NAAQS. The standards currently in effect in California and relevant to the project are shown in **Table 4.3-2**.

TABLE 4.3-2 NATIONAL AND CALIFORNIA AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards [a]	National Standards [b]	
			Primary	Secondary
O_3	1-hour	0.09 ppm (180 µg/m^3)	—	Same as Primary Standard
	8-hour	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	
PM10	24-hour	50 µg/m^3	150 µg/m^3	Same as Primary Standard
	Annual Mean	20 µg/m^3	—	
PM2.5	24-hour	—	35 µg/m^3	Same as Primary Standard
	Annual Mean	12 µg/m^3	12 µg/m^3	15 µg/m^3
CO	1-hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	—
	8-hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	—
NO_2	1-hour	0.18 ppm (339 µg/m^3)	0.100 ppm (188 µg/m^3) [c]	—
	Annual Mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary Standard
SO_2 [d]	1-hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)	—
	3-hour	—	—	0.5 ppm (1,300 µg/m^3)
	24-hour	0.04 ppm (105 µg/m^3)	0.14 ppm (for certain areas) [d]	—
	Annual Mean	—	0.030 ppm (for certain areas) [d]	—

Notes: ppm=parts per million; ppb = parts per billion; µg/m^3 = micrograms per cubic meter; mg/m^3 = milligrams per cubic meter; "—" = no standard

[a] California standards for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded.

[b] National standards (other than O_3, PM, NO_2 [see note c below], and those based on annual arithmetic mean) are not to be exceeded more than once a year. The 8-hour O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. The 24 hour PM10 standard of 150 µg/m^3 is not to be exceeded more than once per year on average over a 3-year period. The 24-hour PM2.5 standard is attained when the 3-year average of 98th percentile concentration is less than or equal to 35 µg/m^3.

[c] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 0.100 ppm.

[d] On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The previous SO_2 standards (24-hour and annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2) any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated nonattainment under the previous SO_2 standards or is not meeting the requirements of a SIP call under the previous SO_2 standards (40 CFR 50.4(3)). A SIP call is a U.S. EPA action requiring a state to resubmit all or part of its State Implementation Plan to demonstrate attainment of the required NAAQS.

Sources: BAAQMD 2021a, U.S. EPA 2022a

Attainment Status and Air Quality Plans

The U.S. EPA, CARB, and the local air districts classify an area as attainment, unclassified, or nonattainment, depending on whether the monitored ambient air quality data show compliance, insufficient data are available, or non-compliance with the AAQS, respectively. The proposed project would be in Santa Clara County in the San Francisco Bay Area Air Basin (SFBAAB), under the jurisdiction of BAAQMD. **Table 4.3-3** summarizes attainment status for the relevant criteria pollutants in the SFBAAB with both NAAQS and CAAQS.

TABLE 4.3-3 ATTAINMENT STATUS FOR SFBAAB

Pollutant	Averaging Time	State Designation	Federal Designation
O_3	1-hour	Nonattainment	—
	8-hour	Nonattainment	Nonattainment
PM10	24-hour	Nonattainment	Unclassified
	Annual	Nonattainment	—
PM2.5	24-hour	—	Nonattainment [a]
	Annual	Nonattainment	Unclassifiable/attainment [b]
CO	1-hour	Attainment	Attainment
	8-hour	Attainment	Attainment
NO_2	1-hour	Attainment	Unclassifiable/Attainment
	Annual	Attainment	Attainment
SO_2	1-hour	Attainment	Attainment/Unclassifiable [c]
	24-hour	Attainment	— [d]
	Annual	—	— [d]

Notes:
[a] On January 9, 2013, U.S. EPA issued a final rule to determine that the Bay Area attains the 24-hour PM2.5 national standard (U.S. EPA 2013). This U.S. EPA rule suspends key SIP requirements as long as monitoring data continues to show that the Bay Area attains the standard. Despite this U.S. EPA action, the Bay Area will continue to be designated as "non-attainment" for the national 24-hour PM2.5 standard until such time as the BAAQMD submits a "redesignation request" and a "maintenance plan" to U.S. EPA, and U.S. EPA approves the proposed redesignation.
[b] In December 2012, U.S. EPA strengthened the annual PM2.5 NAAQS from 15.0 to 12.0 $\mu g/m^3$. In December 2014, U.S. EPA issued final area designations for the 2012 primary annual PM2.5 NAAQS (U.S. EPA 2014). Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.
[c] On January 9, 2018, U.S. EPA issued a final rule to establish the initial air quality designations for certain areas in the U.S. for the 2010 SO_2 primary NAAQS (U.S. EPA 2018b). This final rule designated the SFBAAB as attainment/unclassifiable for the 2010 SO_2 primary NAAQS.
[d] See note d under **Table 4.3-2**.
Sources: CARB 2022a, BAAQMD 2021a, U.S. EPA 2013, U.S. EPA 2014, U.S. EPA 2018b

Overall air quality in the SFBAAB is better than most other developed areas in California, including the South Coast, San Joaquin Valley, and Sacramento air basin regions. This is due to a more favorable climate with cooler temperatures and regional air flow patterns that transport pollutants emitted in the air basin out of the air basin. Although air quality improvements have occurred, violations and exceedances of the state ozone and PM standards continue to persist in the SFBAAB, and still pose challenges to CARB and local

air districts (CARB 2013). The project area's proximity to both the Pacific Ocean and the San Francisco Bay has a moderating influence on the climate. This portion of the Santa Clara Valley is bounded by the San Francisco Bay to the north, the Santa Cruz Mountains to the southwest and west, and the Diablo Range to the northeast. The surrounding terrain greatly influences winds in the valley, resulting in a prevailing wind that flows along the Santa Clara Valley's northwest-southeast axis.

Pollutants in the air can cause health problems, especially for children, the elderly, and people with heart or lung problems. Healthy adults may experience symptoms during periods of intense exercise. Pollutants can also cause damage to vegetation, animals, and property.

Existing Ambient Air Quality

The nearest background ambient air quality monitoring station to the project is the San Jose-Jackson Street station, which is about 3.6 miles south of the project site. **Table 4.3-4** presents the air quality monitoring data from the San Jose-Jackson Street monitoring station from 2016 to 2020, the most recent years for which data are available. Data in this table that are marked in **bold** indicate that the most-stringent current standard was exceeded during that period.

TABLE 4.3-4 AMBIENT AIR QUALITY MONITORING DATA

Pollutant	Averaging Time	2017	2018	2019	2020	2021
O_3 (ppm)	1-hour	**0.121**	0.078	**0.095**	**0.106**	**0.098**
	8-hour	**0.098**	0.061	**0.081**	**0.085**	**0.084**
PM10 (µg/m^3)	24-hour	**70**	**121.8**	**77.1**	**137.1**	45.1
	Annual	**21.3**	**23.1**	19.1	**24.8**	**20.1**
PM2.5 (µg/m^3)	24-hour (98th percentile)	34.3	**73.4**	20.6	**56.1**	23.3
	Annual	9.5	**12.9**	9.1	11.5	8.9
NO_2 (ppb)	1-hour (maximum)	67.5	86.1	59.8	51.9	47.8
	1-hour (98th percentile)	50	59	52	45	39.2
	Annual	12.24	12.04	10.63	9	8.73
CO (ppm)	1-hour	2.1	2.5	1.7	1.9	1.7
	8-hour	1.8	2.1	1.3	1.5	1.5
SO_2 (ppb)	1-hour (maximum)	3.6	6.9	14.5	2.9	1.8
	1-hour (99th percentile)	3	3	2	2	2
	24-hour	1.1	1.1	1.5	0.8	0.7

Notes: All data from San Jose-Jackson Street monitoring station.
Concentrations in **bold** type are those that exceed the limiting ambient air quality standard.
Sources: CARB 2022b, U.S. EPA 2022b

The maximum concentration values listed in **Table 4.3-4** have not been screened to remove values that are designated as exceptional events. Violations that are the result of exceptional events, such as wildfires, are normally excluded from consideration as AAQS violations. Exceptional events undoubtedly affected many of the maximum concentration

values in recent years, especially between September to mid-November during wildfire activity. The ozone, PM10, and PM2.5 in 2017, 2018, and 2020 illustrate the effect of events like the extensive northern California wildland fires.[2] Even though fires tended to be far from the monitoring stations, the blanket of smoke and adverse air quality most likely affected air monitoring stations in the urban areas surrounding the project. For a conservative analysis, staff uses the background ambient air quality concentrations from 2018 to 2020 to represent the baseline condition at the project site.

Health Effects of Criteria Pollutants

Below are descriptions of the health effects of criteria pollutants that are a concern in the regional study area. Health and Safety Code, section 39606 requires CARB to adopt ambient air quality standards at levels that adequately protect the health of the public, including infants and children, with an adequate margin of safety. Ambient air quality standards define clean air (CARB 2021c).

Ozone. Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and that can cause substantial damage to vegetation and other materials. Ozone is not emitted directly into the atmosphere but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and NOx, including NO_2. ROG and NOx are known as precursor compounds for ozone. Significant ozone production generally requires ozone precursors to be present in a stable atmosphere with strong sunlight.

Ozone can cause the muscles in the airways to constrict, trapping air in the alveoli, potentially leading to wheezing and shortness of breath. Ozone can make it more difficult to breathe deeply and vigorously; cause shortness of breath and pain when taking a deep breath; cause coughing and sore or scratchy throat; inflame and damage the airways; aggravate lung diseases, such as asthma, emphysema, and chronic bronchitis; increase the frequency of asthma attacks; make the lungs more susceptible to infection; continue to damage the lungs even when the symptoms have disappeared; and cause chronic obstructive pulmonary disease. Long-term exposure to ozone is linked to the aggravation of asthma and is likely to be one of many causes of asthma development. Long-term exposures to higher concentrations of ozone may also be linked to permanent lung damage, such as abnormal lung development in children. The inhalation of ozone causes inflammation and irritation of the tissues lining human airways, causing and worsening a variety of symptoms, and exposure to ozone can reduce the volume of air that the lungs breathe in and cause shortness of breath.

People most at risk for adverse health effects from breathing air containing ozone include people with asthma, children, older adults, and people who are active outdoors, especially outdoor workers. Children are at greatest risk from exposure to ozone because their lungs are still developing and they are more likely to be active outdoors when ozone levels are

2 Wildfires also emit substantial amounts of volatile and semi-volatile organic materials and nitrogen oxides that form ozone and organic particulate matter (NOAA 2022).

high, which increases their exposure. Studies show that children are no more or less likely to suffer harmful effects than adults; however, children and teens may be more susceptible to ozone and other pollutants because they spend nearly twice as much time outdoors and engage in vigorous activities compared to adults. Children breathe more rapidly than adults and inhale more pollution per pound of their body weight than adults and are less likely than adults to notice their own symptoms and avoid harmful exposures.

Particulate Matter. PM10 and PM2.5 represent size fractions of particulate matter that can be inhaled into air passages and the lungs and can cause adverse health effects. Very small particles of certain substances (e.g., sulfates and nitrates) can cause lung damage directly or can contain absorbed gases (e.g., chlorides or ammonium) that may be injurious to health. The health effects of particulate matter may include cardiovascular effects, such as cardiac arrhythmias and heart attacks, and respiratory effects, such as asthma attacks and bronchitis. Particulates can also reduce visibility.

Nitrogen Dioxide. Breathing air with a high concentration of NO_2 can irritate airways in the human respiratory system. Such exposures over short periods (as represented by the 1-hour standards) can aggravate respiratory diseases, particularly asthma, leading to respiratory symptoms (such as coughing, wheezing or difficulty breathing), hospital admissions, and visits to emergency rooms. Longer exposures to elevated concentrations of NO_2 (as represented by the annual standards) may contribute to the development of asthma and potentially increase susceptibility to respiratory infections. People with asthma, as well as children and the elderly, are generally at greater risk for the health effects of NO_2. NOx (includes NO_2 and NO) reacts with other chemicals in the air and sunlight to form both particulate matter and ozone.

Carbon Monoxide. CO is a pollutant that is a product of incomplete combustion and is mostly associated with motor vehicle traffic. High CO concentrations develop primarily

during winter when periods of light winds combine with the formation of ground-level temperature inversions (typically from the evening through early morning). These conditions result in the reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia.

Sulfur Dioxide. SO_2 is produced through the combustion of sulfur or sulfur-containing fuels, such as coal. SO_2 is also a precursor to the formation of atmospheric sulfate and particulate matter (PM10 and PM2.5) and contributes to potential atmospheric sulfuric acid formation that could precipitate downwind as acid rain.

Lead. Lead has a range of adverse neurotoxin health effects and previously was predominately released into the atmosphere primarily via the combustion of leaded

gasoline. The phase-out of leaded gasoline has resulted in decreasing levels of atmospheric lead.

Toxic Air Contaminants

Health and Safety Code, section 39655 defines a toxic air contaminant as "an air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health." In addition, substances that have been listed as HAPs pursuant to 42 U.S.C. section 7412 are TACs under the state law pursuant to Health and Safety Code, section 39657 (b). CARB formally identified HAPs in California Code of Regulations, Title 17, section 93001 (OEHHA 2022). TACs, also referred to as HAPs or air toxics, differ from criteria pollutants such as ground-level ozone, particulate matter, carbon monoxide, nitrogen dioxide, sulfur dioxide, and lead. Criteria pollutants are regulated using NAAQS and CAAQS, as noted above. However, there are no ambient standards for most TACs[3] so site-specific HRAs are conducted to evaluate whether risks of exposure to TACs create an adverse impact. Specific TACs have known acute, chronic, and cancer health impacts. CARB has identified TACs in California Code of Regulations, Title 17, sections 93000 and 93001. The nearly 200 regulated TACs include asbestos, organic chemical compounds, and inorganic chemical compounds and compound categories, diesel exhaust, and certain metals. The requirements of the Air Toxic "Hot Spots" Information and Assessment Act of 1987 (Health and Safety Code, sec. 44300 et. seq) apply to facilities that emit these listed TACs above regulated threshold quantities.

Health Effects of TACs

The health effects associated with TACs are quite diverse and are generally assessed locally rather than regionally. TACs could cause long-term health effects, such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage; or short-term effects, such as eye watering, respiratory irritation (a cough), runny nose, throat pain, and headaches (BAAQMD 2017b, pg. 5-1). Numerous other health effects also have been linked to exposure to TACs, including heart disease, Sudden Infant Death Syndrome, respiratory infections in children, lung cancer, and breast cancer (OEHHA 2015).

The primary on-site TAC emission sources for the SVYBGF would be diesel engines, including engines in vehicles and equipment used during construction and stationary genset engines during readiness testing and maintenance. Diesel exhaust is a complex mixture of thousands of gases and fine particles and contains over 40 substances listed by the U.S. EPA as HAPs and by CARB as TACs. The solid material in diesel exhaust is known as DPM (CARB 2022d).

DPM has been the accepted surrogate for whole diesel exhaust since the late 1990s. CARB identified DPM as the surrogate compound for whole diesel exhaust in its Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant staff report in April 1998

3 Ambient air quality standards for TACs exist for lead (federal and state standards), hydrogen sulfide (state standard), and vinyl chloride (state standard).

(Appendix III, Part A, Exposure Assessment [CARB 1998]). DPM is primarily composed of aggregates of spherical carbon particles coated with organic and inorganic substances. Diesel exhaust deserves particular attention because of its ability to induce serious noncancerous effects and its status as a likely human carcinogen. Diesel exhaust is also characterized by CARB as "particulate matter from diesel-fueled engines." The impacts from human exposure would include both short and long-term health effects. Short-term effects can include increased coughing, labored breathing, chest tightness, wheezing, and eye and nasal irritation. Effects from long-term exposure can include increased coughing, chronic bronchitis, reductions in lung function, and inflammation of the lung. Epidemiological studies strongly suggest a causal relationship between occupational diesel exhaust exposure and lung cancer. Diesel exhaust is listed by the U.S. EPA as "likely to be carcinogenic to humans" (U.S. EPA 2002).

Sensitive Receptors

Sensitive receptors are defined as groups of individuals that may be more susceptible to health risks due to chemical exposure. Sensitive individuals, such as infants, the aged, and people with specific illnesses or diseases, are the subpopulations that are more sensitive to the effects of toxic substance exposure. Examples of sensitive receptors include residences, schools and school yards, parks and playgrounds, daycare centers, nursing homes, and medical facilities. Residences could include houses, apartments, and senior living complexes. Medical facilities could include hospitals, convalescent homes, and health clinics. Playgrounds could be play areas associated with parks or community centers (BAAQMD 2017b, pg. 5-8). The potential sensitive receptor locations evaluated in the HRA for SVYBGF include (DayZenLLC 2022a, pg. 101):

- Residential dwellings, including apartments, houses, and condominiums.
- Schools, colleges, and universities.
- Daycare centers.
- Hospitals and health clinics.

Sensitive Receptors Near the Project

BAAQMD CEQA Guidelines recommends that any proposed project, including the siting of a new TAC emissions source, assess associated community risks and hazards impacts within 1,000 feet of the proposed project and take into account both individual and nearby cumulative sources (that is, the proposed project plus existing and foreseeable future projects). Cumulative sources represent the combined total risk values of each individual source within the 1,000-foot evaluation zone. A lead agency should enlarge the 1,000-foot radius on a case-by-case basis if an unusually large source or sources of risk or hazard emissions that may affect a proposed project is beyond the recommended radius (BAAQMD 2017b, Table 2-1, pg. 5-2, and pg. 5-3).

In other projects, staff used a six-mile radius for cumulative impacts analyses of power plant projects that were substantially different than the current project. In those larger projects, based on staff's modeling experience, beyond six miles there is no statistically

significant concentration overlap for nonreactive pollutant concentration between two stationary emission sources. The six-mile radius is appropriate to be used for turbines with tall stacks and more buoyant plumes than are present in the current project. Instead, in the current project, the subject diesel genset engines would result in more localized impacts due to shorter stacks and less buoyant plumes. The worst-case impacts of the diesel genset engines would occur at or near the fenceline and decrease rapidly with distance from fenceline. Therefore, staff believes that the BAAQMD CEQA Guidelines-recommended 1,000 feet is reasonable for the cumulative HRA of the project.

The project site is approximately 9.8 acres (DayZenLLC 2022a, pg. 93). The applicant conducted a sensitive receptor search within 1,000 feet of the project, which corresponds to the BAAQMD recommended 1,000-ft evaluation zone and determined that the closest residential use areas are to the north across Trade Zone Boulevard. The nearest sensitive receptor is located within these residential areas, about 150 feet from the fenceline. The nearest school or daycare to the facility was found to be a daycare (Lucciola Academy) approximately 330 feet north of the project boundary, however, the applicant did not include this receptor in their HRA (DayZenLLC 2022a, pg. 101). All schools and daycare facilities within 1,000 feet were also analyzed in Staff's HRA. A map of the nonresidential sensitive receptors, such as schools, recreational areas, and daycares, within or just beyond a 1,000-foot radius of the SVYBGF project site is presented in **Figure 4.3-1**.

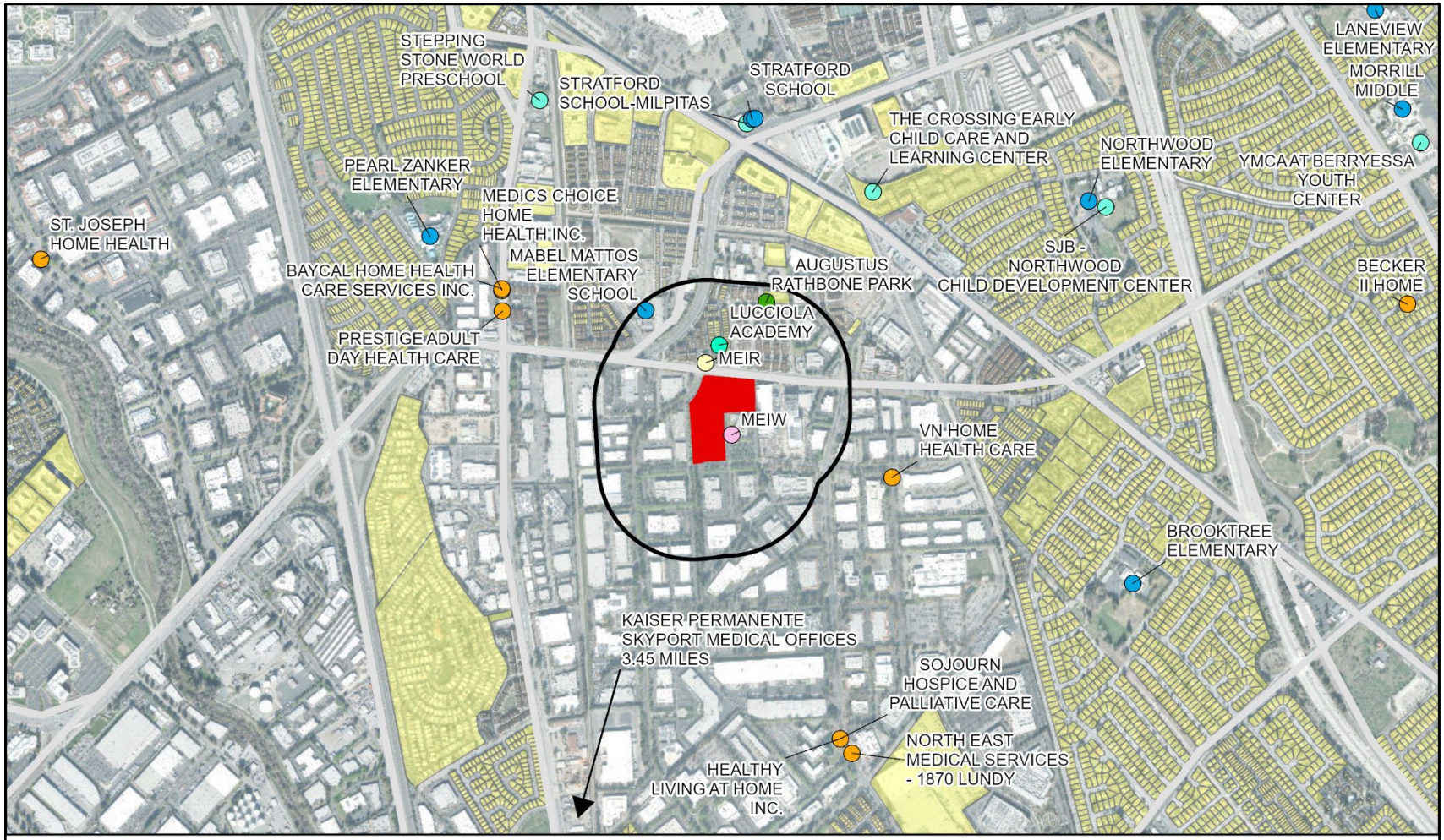

Figure 4.3-1
1,000 Foot Influence Zone

Regulatory Background

Federal, state, and regional agencies share responsibility for managing and regulating air quality in the SFBAA.

Federal

Federal Clean Air Act. The federal Clean Air Act (CAA) (42 U.S.C. section 7401 et. seq) establishes the statutory framework for regulation of air quality in the United States. Under the CAA, the U.S. EPA oversees the implementation of federal programs for permitting new and modified stationary sources, controlling TACs, and reducing emissions from motor vehicles and other mobile sources.

Title I (Air Pollution Prevention and Control) of CAA requires the establishment of NAAQS, air quality designations, and plan requirements for nonattainment areas. States are required to submit a SIP to the U.S. EPA for areas in nonattainment with NAAQS. The SIP must demonstrate how state and local regulatory agencies will institute rules, regulations, and other programs to attain NAAQS. Once approved by the U.S. EPA and published in the Federal Register, the local air district rules contained in the SIP are federally enforceable.

The Prevention of Significant Deterioration (PSD) program is a federal program for federal attainment areas. The purpose of the federal PSD program is to ensure that attainment areas remain in attainment of NAAQS based upon a proposed facility's annual PTE. If the annual emissions of a proposed project are less than prescribed amounts, a PSD review is not required. SVYBGF is not expected to be subject to PSD, with a final determination made by BAAQMD at the time of permitting following the CEC determination.

New Source Performance Standard (NSPS) Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. CAA section 111 (42 U.S.C. section 7411) authorizes the U.S. EPA to develop technology-based standards for specific categories of sources. Manufacturers of emergency stationary internal combustion engines (ICE) using diesel fuel must certify that new engines comply with these emission standards (40 CFR 60.4205). Under NSPS Subpart IIII, owners and operators of emergency engines must limit operation to a maximum of 100 hours per year for maintenance and testing, which allows for some use if necessary, to protect grid reliability; there is no time limit on the use of an emergency stationary ICE in emergency situations (40 CFR 60.4211(f)). The project's Tier 4 diesel-fired gensets would be subject to and likely to comply with the requirements in NSPS Subpart IIII.

National Emission Standards for Hazardous Air Pollutants. CAA section 112 (42 U.S.C. section 7412) addresses emissions of HAPs. CAA defines HAPs as a variety of substances that pose serious health risks. Direct exposure to HAPs has been shown to cause cancer, reproductive effects or birth defects, damage to the brain and nervous system, and respiratory disorders. Categories of sources that cause HAP emissions are controlled through separate standards under CAA Section 112: National Emission

Standards for Hazardous Air Pollutants (NESHAP). These standards are specifically designed to reduce the potency, persistence, or potential bioaccumulation of HAPs. New sources that emit more than 10 tpy of any specified HAP or more than 25 tpy of any combination of HAPs are required to apply Maximum Achievable Control Technology (MACT).

Asbestos is a HAP regulated under the NESHAP. The asbestos NESHAP is intended to provide protection from the release of asbestos fibers during activities involving the handling of asbestos. CAA air toxics regulations specify work practices for asbestos to be followed during demolitions and renovations. The regulations require a thorough inspection of the area where the demolition or renovation would occur and advance notification of the appropriate delegated entity. Work practice standards that control asbestos emissions must be implemented, such as removing all asbestos-containing materials (ACM), adequately wetting all regulated ACM, and sealing ACM in leak-tight containers and disposing of the asbestos-containing waste material as expediently as practicable.

State

Generally, state law designates local air districts as having primary responsibility for the control of air pollution from all sources other than mobile sources while the control of vehicular air sources is the responsibility of CARB. (Health and Safety Code, section 39002) CARB is also responsible for the state's overall air quality management, including, among other things, establishing CAAQS for criteria pollutants identifying TACs of statewide concern and adopting measures to reduce the emissions of those TACs through airborne toxic control measures (ATCM), and regulating emissions of GHGs.

Air Toxic "Hot Spots" Information and Assessment Act of 1987. The Air Toxic "Hot Spots" Information and Assessment Act of 1987 (Health and Safety Code, section 44300 et. seq), also known as Assembly Bill (AB) 2588, identifies TAC hot spots where emissions from specific stationary sources may expose individuals to an elevated risk of adverse health effects, particularly cancer or reproductive harm. Many TACs are also classified as HAPs. AB 2588 requires that a business or other establishment identified as a significant stationary source of toxic emissions provide the affected population with information about the health risks posed by their emissions.

Airborne Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines, Emergency Standby Diesel-Fueled Compression Ignition Engines. Statewide regulations govern the use of and emissions performance standards for emergency standby diesel-fueled engines, including those of the project. As defined in regulation (17 CCR section 93115.4(a)(29)), an emergency standby engine is, among other possible uses, one that provides electrical power during an emergency, is not the source of primary power at the facility, and is not operated to supply power to an electric grid. The corresponding ATCM (17 CCR section 93115.6) restricts each emergency standby engine to operate no more than 50 hours per year for maintenance and testing

purposes. The ATCM establishes no limit on engine operation for emergency use or for emission testing to show compliance with the ATCM's standards.

Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations. CARB has adopted the Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations to minimize the generation of asbestos from earth disturbance or construction activities (17 CCR section 93105). The Asbestos ATCM applies to any project that would include sites to be disturbed in a geographic ultramafic rock unit area or an area where naturally occurring asbestos (NOA), serpentine, or ultramafic rocks are determined to be present. Based upon review of the U.S. Geological Survey map detailing the natural occurrence of asbestos in California, NOA is not expected to be present at the project site (Van Gosen and Clinkenbeard 2011).

Regional

BAAQMD is the regional agency charged with preparing, adopting, and implementing emissions control measures and standards for stationary sources of air pollution pursuant to state and federal authority for all stationary projects located within their jurisdiction. Under the California CAA state law, the BAAQMD is required to develop an air quality plan to achieve and/or maintain compliance with federal and state nonattainment AAQS within the air district's boundary.

Bay Area 2017 Clean Air Plan. BAAQMD adopted the Bay Area 2017 Clean Air Plan on April 19, 2017 (BAAQMD 2017a). The 2017 Clean Air Plan provides a regional strategy to protect public health and protect the climate. The 2017 Clean Air Plan updates the most recent Bay Area ozone plan, the 2010 Clean Air Plan, pursuant to air quality planning requirements defined in state law. The 2017 Clean Air Plan defines an integrated, multi-pollutant control strategy to reduce emissions of particulate matter, TACs, ozone and key ozone precursors, and greenhouse gases.

BAAQMD California Environmental Quality Act Guidelines. BAAQMD publishes CEQA Air Quality Guidelines to assist lead agencies in evaluating a project's potential impacts on air quality. The BAAQMD published the most recent version of its CEQA Air Quality Guidelines in May 2017 (BAAQMD 2017b).

BAAQMD Regulation 2, Rule 2: New Source Review (NSR). This rule applies to all new or modified sources requiring an Authority to Construct permit and/or Permit to Operate. The NSR process requires the applicant to use BACT to control emissions if the source will have the PTE of a BAAQMD BACT pollutant in an amount of 10 or more pounds per day (lbs/day). The NSR process also establishes the requirements to offset emissions increases and to protect NAAQS.

For emergency-use diesel engines with output over 1,000 brake horsepower, BAAQMD updated the definition of BACT in December 2020 to reflect the use of engines achieving Tier 4 exhaust standards (BAAQMD 2020); this includes Tier 4-compliant engines that

utilize Tier 2 engines and are abated by catalyzed diesel particulate filters (DPF) and selective catalytic reduction (SCR). Each of the 39 diesel back-up emergency generators would be equipped with SCR equipment and DPFs to achieve compliance with Tier 4 emission standards. Staff expects that the proposed generators would meet current BAAQMD BACT requirements. However, BAAQMD will make the final determination of BACT during the permitting process.

To prevent sources from worsening regional nonattainment conditions, the NSR rule requires offsets at a 1:1 ratio if more than 10 tpy of NO_X or Precursor Organic Compounds (POC), or more than 100 tpy of PM2.5, PM10, or SO_2, are emitted. If the PTE for NOx or POC is more than 10 tpy but less than 35 tpy, BAAQMD needs to provide any required offsets at 1:1 ratio from the Small Facility Banking Account in BAAQMD's Emissions Bank. If the PTE for NOx or POC is 35 tpy or more, the offset ratio increases to 1.15:1 and offsets can no longer be obtained through the Small Facility Banking Account.

On June 3, 2019, BAAQMD staff issued a new policy to protect the Small Facility Banking Account from over-withdrawal by new emergency backup generator sources. The policy provides procedures, applicable to the determination of access to the Small Facility Banking Account only, for calculating a facility's PTE to determine eligibility for emission reduction credits (ERCs) from the Small Facility Banking Account for emergency backup generators (BAAQMD 2019). When determining the PTE for a facility with emergency backup generators, the PTE shall include as a proxy, emissions proportional to emergency operation for 100 hours per year per standby generator, in addition to the permitted limits for readiness testing and maintenance (generally 50 hours/year or less per standby or backup engine). BAAQMD would not allow an owner/operator to accept a permit condition to limit emergency operation to less than 100 hours per year to reduce the source's PTE for purposes of qualifying for the Small Facility Banking Account.

After comparing the PTE calculated to determine the account eligibility threshold, the amount of offsets required would be determined only by the permitted emissions from readiness testing and maintenance and not the emissions from emergency operation. Emissions offsets represent ongoing emission reductions that continue every year, year after year, in perpetuity. BAAQMD requires the use of offsets to counterbalance increases in regular and predictable emissions, not increases in emissions occurring infrequently when emergency conditions arise. An owner/operator may reduce the hours of readiness testing and maintenance or install emissions controls to achieve a PTE of less than 35 tons per year (BAAQMD 2019).

BAAQMD Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants. This rule provides for the review of new and modified sources of TAC emissions to evaluate potential public exposure and health risk. Under this rule, a project would be denied an Authority to Construct permit if it exceeds any of the specified risk limits, which are consistent with BAAQMD's recommended significance thresholds. Best Available Control Technology for Toxics (TBACT) would also be required for any new or modified source of TACs where the source has a cancer risk greater than 1.0 in 1 million or a chronic hazard index (HI) greater than 0.20. The specific toxicity values of each TAC for

use in an HRA, as identified by California Office of Environmental Health Hazard Assessment (OEHHA), are listed in Table 2-5-1 of BAAQMD Rule 2-5.

BAAQMD Regulation 9, Rule 8: Nitrogen Oxides And Carbon Monoxide From Stationary Internal Combustion Engines. This rule limits NOx and CO emissions from stationary internal combustion engines with an output rated by the manufacturer at more than 50 brake horsepower, including the standby gensets of the project. This regulation (Rule 9-8-231) defines emergency use as "the use of an emergency standby or low usage engine during any of the following:"

- In the event of unforeseeable loss of regular natural gas supply;
- In the event of unforeseeable failure of regular electric power supply;
- Mitigation or prevention of an imminent flood;
- Mitigation of or prevention of an imminent overflow of sewage or waste water;
- Fire or prevention of an imminent fire;
- Failure or imminent failure of a primary motor or source of power, but only for such time as needed to repair or replace the primary motor or source of power; or
- Prevention of the imminent release of hazardous material.

Local

City of San Jose General Plan. *Envision San Jose 2040 General Plan* includes policies for the purpose of avoiding or mitigating impacts resulting from planned development projects with the City. The relevant air quality policies applicable to the project include:

- MS-10.1: Assess projected air emissions from new development in conformance with the BAAQMD CEQA Guidelines and relative to state and federal standards. Identify and implement feasible air emission reduction measures.
- MS-11.2: For projects that emit toxic air contaminants, require project proponents to prepare health risk assessments in accordance with BAAQMD-recommended procedures as part of environmental review and employ effective mitigation to reduce possible health risks to a less than significant level. Alternatively, require new projects (such as, but not limited to, industrial, manufacturing, and processing facilities) that are sources of TACs to be located an adequate distance from residential areas and other sensitive receptors.
- MS-13.1: Include dust, particulate matter, and construction equipment exhaust control measures as conditions of approval for subdivision maps, site development and planned development permits, grading permits, and demolition permits. At minimum, conditions shall conform to construction mitigation measures recommended in the current BAAQMD CEQA Guidelines for the relevant project size and type.

In addition, goals and policies throughout the *Envision San Jose 2040 General Plan* encourage a reduction in vehicle miles traveled through land use, pedestrian and bicycle

improvements, and parking strategies that reduce automobile travel through parking supply and pricing management.

City of San Jose, Natural Gas Infrastructure Prohibition. See **Section 4.8 Greenhouse Gas Emissions** for a discussion on this prohibition.

4.3.3 Environmental Impacts

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

This section considers the project's consistency with the applicable air quality plan (AQP). This is a qualitative determination that considers the combined effects of project construction and operation.

Construction and Operations

Less Than Significant Impact. BAAQMD has permit authority over stationary sources, acts as the primary reviewing agency for environmental documents, and adopts rules that must be consistent with or more stringent than federal and state air quality laws and regulations. The applicable AQP is the Bay Area 2017 Clean Air Plan (BAAQMD 2017a).

A project would be consistent with the AQP if that project (BAAQMD 2017b, pg. 9-2 and 9-3):

1) Supports the primary goals of the AQP.

The determination for this criterion can be met through consistency with the BAAQMD significance thresholds. As can be seen in the discussions under environmental checklist criteria "b" and "c" of this air quality analysis, the project would have less than significant impacts related to the BAAQMD significance thresholds. Therefore, the project would have a less than significant impact related to the primary goals of the AQP.

2) Includes applicable control measures from the AQP.

The project would include the implementation of applicable control measures from the AQP. The project-level applicable control measures set forth in the Bay Area 2017 Clean Air Plan include: Decarbonize Electricity Generation (EN1), Green Buildings (BL1), and Bicycle and Pedestrian Access and Facilities (TR9). The project would comply with these control measures through compliance with the city's General Plan and the city's Climate Action Plan, as demonstrated in more detail in **Section 4.8 Greenhouse Gas Emissions**.

3) Does not disrupt or hinder implementation of any AQP control measures.

Examples of disrupting or hindering implementation of an AQP would be proposing excessive parking or precluding the extension of public transit or bike paths. The project design as proposed is not known to hinder the implementation of any AQP control measure.

The analysis in this section demonstrates that the project emissions would not exceed BAAQMD significance thresholds with NOx emissions fully offset through the permitting process with BAAQMD, as discussed under criterion "b" of the environmental checklist, and the project would not expose sensitive receptors to substantial pollutant concentrations, as discussed under criterion "c" of the environmental checklist. Thus, the project would be consistent with the Bay Area 2017 Clean Air Plan and would have a less than significant impact related to implementation of the applicable AQP.

BAAQMD Regulation 2, Rule 2: New Source Review (NSR). As discussed under criterion "b" of the environmental checklist, the NOx emissions of the gensets during readiness testing and maintenance would be fully offset through the permitting process with BAAQMD. Final details regarding the calculation of the facility's PTE and the ultimate NSR permitting requirements under BAAQMD's Regulation 2, Rule 2, would be determined through the permitting process with BAAQMD. The discussion below explains how the district will calculate the necessary offsets.

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

This section quantifies the project's nonattainment criteria pollutant emissions and other criteria pollutant emissions to determine whether the net emissions increase would exceed any of the BAAQMD emissions thresholds for criteria pollutants. TAC effects are not included because this section focuses only on criteria pollutants.

Construction

Less Than Significant with Mitigation Incorporated. Project demolition/construction would include two phases. The first phase of construction (Phase I) would take approximately 16-19 months. Phase I construction includes demolition activities, grading and site work installation of utility services for interim power, construction of an on-site substation, construction of the AMB, SVY05, and parking garage, and placement of approximately one-half of the gensets. The second phase of construction (Phase II) would take approximately 16 months. Phase II includes the construction of SVY06 and the placement of the remaining half of the gensets (DayZen LLC, 2022a). Construction-phase emissions would result from the use of construction equipment, material movement, paving activities, and on-site and off-site vehicle trips, such as material haul trucks, worker commutes, and delivery vehicles.

Emissions from the construction period were estimated using the California Emissions Estimator Model[4] (CalEEMod) program. The estimated criteria pollutant construction-phase emissions are summarized in **Table 4.3-5**.

TABLE 4.3-5 CRITERIA POLLUTANT EMISSIONS FROM PROJECT CONSTRUCTION

Pollutant	Average Daily Emissions (lbs/day) [a]	Maximum Annual Construction Emissions (tpy)	BAAQMD Significance Thresholds for Construction-related Average Daily Emissions (lbs/day) [c]	Threshold Exceeded ?
ROG/VOC	22.05	2.91	54	No
CO	37.90	5.00	None	N/A
NOx	7.93	1.05	54	No
SOx	0.08	0.08	None	N/A
PM10 [b]	0.12 (exhaust) 2.92 (fugitive)	0.016 (exhaust) 0.39 (fugitive)	82	No
PM2.5 [b]	0.12 (exhaust) 1.13 (fugitive)	0.016 (exhaust) 0.15 (fugitive)	54	No

Notes:
[a] There are no annual construction-related BAAQMD significance thresholds. BAAQMD's thresholds are average daily thresholds for construction. Average daily emissions are calculated as the annual emissions from the year with the highest emissions of each criteria pollutant divided by the days in an annual work period (264 days assuming 12 months and 22 days/month).
[b] The average daily PM10 and PM2.5 exhaust emissions are compared to BAAQMD's significance thresholds for exhaust emissions. Fugitive emissions will be controlled with best management practices (BMPs), in accordance with the significance threshold. Calculated fugitive emissions include abatement due to twice per day watering during the construction phase.
[c] BAAQMD 2017b, Table 2-1.
Source: DayZenLLC 2022b, CEC staff analysis

The average daily emissions for each phase shown in **Table 4.3-5** indicate that construction emissions would be lower than the applicable BAAQMD significance thresholds for all criteria pollutants.

BAAQMD's numerical thresholds for PM10 and PM2.5 construction-phase emissions apply to exhaust emissions only. BAAQMD has no numerical threshold for fugitive dust generated during construction. The BAAQMD CEQA Guidelines recommend the control of fugitive dust through BMPs to conclude that impacts from fugitive dust emissions are less than significant (BAAQMD 2017b). The applicant proposed measures that would incorporate BAAQMD's recommended construction BMPs as well as exhaust emissions mitigation measures. Staff reviewed the measures and finds them sufficient to address impacts from construction emissions. Staff recommends **AQ-1** to ensure that PM10 and PM2.5 emissions are reduced to a level that would not result in a considerable increase

4 CalEEMod was developed by the California Air Pollution Control Officers Association in collaboration with California Air Districts. This model is a construction and emissions estimating computer model that estimates direct criteria pollutant and direct and indirect greenhouse gas emissions for a variety of land use projects. The model calculates maximum daily and annual emissions. The model also identifies mitigation measures to reduce criteria pollutant and GHG emissions along with calculating the benefits achieved from measures.

of these pollutants. This impact would be reduced to less than significant with the implementation of **AQ-1**.

Operation

Less Than Significant with Mitigation Incorporated. Operational emissions would result from diesel fuel combustion from the gensets, off-site vehicle trips for worker commutes and material deliveries, and facility upkeep, such as architectural coatings, consumer product use, landscaping, water use, and waste generation (DayZenLLC 2022a). Operational emissions from natural gas are not expected as the applicant has committed to not installing any natural gas infrastructure to ensure compliance with the San Jose Reach Code (DayZenLLC 2022h). Additionally, the applicant's proposed enrollment in a clean energy program providing 100% carbon-free electricity would decrease indirect emissions from electricity use to a negligible amount. Each of the primary emission sources are described in more detail below.

Stationary Sources – Generator Emissions. The project would include 39 gensets, with 36 powered by 2.75-MW Caterpillar Model 3516E engines and 3 powered by 1-MW Caterpillar Model C32 engines. Each engine would be equipped with SCR and a DPF to achieve compliance with Tier 4 emission standards (DayZenLLC 2022a).

All gensets would be operated for routine maintenance and readiness testing to ensure that they would function during an emergency event. During routine readiness testing, criteria pollutants and TACs would be emitted directly from the gensets. The applicant used emission factors provided by the Boulden Company for the SCR-equipped engine configuration to estimate both controlled and uncontrolled emissions performance. In estimating the annual emissions, the applicant assumed that testing and maintenance operations would occur for no more than 50 hours per year for each engine. Average daily emissions were estimated by assuming that a maximum of 8 3-MW engines and 1 1-MW engine would be tested in one day, with testing limited to one engine at any time. The Airborne Toxic Control Measure for Stationary Compression Ignition Engines (CCR, Title 17, Section 93115) limits testing and maintenance operations to 50 hours per year per engine. Emissions during testing and maintenance operations were modeled by the applicant using a composite NOx emission factor, which averaged the NOx emissions produced before and after an engine's SCR system reached its steady-state operating temperature (assuming that the SCR system would take 15 minutes to reach its steady-state operating temperature and that each engine would not run more than 1 hour each day for maintenance and testing purposes).

Emergency Operations. Emissions that could occur in the event of a power outage or other disruption, upset, or instability that triggers emergency operations would not occur on a regular or predictable basis. However, the BAAQMD 2019 policy, *Calculating Potential to Emit for Emergency Backup Power Generators*, requires a facility's PTE to be calculated based on emissions proportional to emergency operation for 100 hours per year per genset, in addition to the permitted limits for readiness testing and maintenance (BAAQMD 2019). The policy also states that the required 100 hours of emergency

operation would not be used to determine offsets, as offsets are used to counterbalance increases in regular and predictable emissions, not increases in emissions occurring infrequently when emergency conditions arise. The potential ambient air quality impacts of emissions during emergency operations are analyzed qualitatively under environmental checklist criterion "c."

Miscellaneous Operational Emissions. Miscellaneous emissions would occur from operational activities, such as worker travel, deliveries, energy use for facility electrical, heating and cooling needs, periodic use of architectural coatings, and landscaping. The applicant estimated the miscellaneous operational emissions using CalEEMod.

Table 4.3-6 provides the annual and average daily criteria pollutant emission estimates for project operation, including readiness testing and maintenance, using the emission source assumptions noted above. The average daily emissions are based on annual emissions averaged over 365 days per year. The NOx emissions of the gensets are estimated using Tier 2 emission factors for the first 15 minutes of operation, assuming that the SCRs are not effective during that portion of readiness testing and maintenance operation. Tier 4 emission factors would be used for the remainder of the one hour allowed for testing and maintenance operation. Using these assumptions, the NOx PTE of the project would be below 35 tpy, and, therefore, the NOx emissions would be fully offset through BAAQMD's Small Facility Banking Account at a ratio of 1:1. For the 100 hours of emergency operations (considering the BAAQMD 2019 policy [BAAQMD 2019]), the applicant assumed that operation of all engines would occur at Tier 4 emission levels. The applicant calculated the Total NOx PTE for engine operation, including 100 hours of emergency operation, to be 19.43 tpy, less than the 35 tpy threshold (DayZenLLC 2022q). Therefore, the offset ratio would be 1:1 with the inclusion of the BAAQMD policy-required 100 hours. Staff performed additional calculations to determine whether using a composite NOx emission factor for the 100 hours of emergency operation and 50 hours of readiness testing and maintenance. Staff used a 3-hour emergency operation runtime assumption and assumed Tier 2 NOx emission levels for the first 15 minutes and Tier 4 NOx emission levels for the remainder of the 3-hour block. Under this scenario, Total NOx PTE for engine operation was 24.15 tpy, still below 35 tpy.

The exact amount and the source of the NOx offsets would be confirmed through the permitting process with BAAQMD. When BAAQMD reviews the permit application for the project, it will perform a refined emissions calculation based on the applicant's testing plan (including testing frequency, duration, and load, etc.) and the specifications from the SCR vendor. If it is uncertain whether the SCR would become effective during readiness testing and maintenance, BAAQMD may also use the most conservative calculation assuming Tier 2 emissions.

NOx emissions and offsets shown in **Table 4.3-6** were calculated using composite emission factors, however, BAAQMD may require calculations assuming fully Tier 2 or fully Tier 4 operation, and modify the offset requirement accordingly. Nonetheless, the NOx emissions of the gensets during readiness testing and maintenance would be fully offset through the permitting process with BAAQMD. Emissions from miscellaneous

sources are not required to be offset under BAAQMD permitting policy, which only applies to stationary sources.

Table 4.3-6 shows that with NOx emissions from the readiness testing and maintenance of the gensets fully offset through the permitting process with BAAQMD, the project would not exceed any of the BAAQMD emissions significance thresholds. The BAAQMD CEQA Guidelines state that, if the project's daily average or annual emissions of operational-related criteria pollutants or precursors do not exceed any applicable threshold of significance listed in **Table 4.3-1**, the proposed project would not result in a cumulatively significant impact (BAAQMD 2017b). Therefore, **Table 4.3-6** shows that the project would not be expected to result in a cumulatively considerable net increase of criteria pollutants during the lifetime of the project, including the readiness testing and maintenance of the gensets.

In addition to the emissions shown in **Table 4.3-6**, ammonia would also be emitted from the urea used in the SCR system. Ammonia is considered a particulate precursor but not a criteria pollutant. Reactive with sulfur and nitrogen compounds, ammonia is common in the atmosphere primarily from natural sources or as a byproduct of tailpipe controls on motor vehicles. Currently, there are no BAAQMD-recommended models or procedures for estimating secondary particulate nitrate or sulfate formation from individual sources, such as the proposed project. BAAQMD CEQA Guidelines do not include a significance threshold for ammonia emissions. The primary emissions of particulate matter from this project are well below the BAAQMD significance threshold and do not require additional mitigation or trigger the need for offsets. In addition, the applicant conservatively estimated the ammonia emissions of the project to be 0.74 tpy (1620 lbs/yr), assuming that the SCR is effective for a total of 50 hours per year per engine (DayZenLLC 2022f). However, it would take time for the SCR to warm up, especially during low-load readiness testing and maintenance, and, therefore, actual ammonia emissions would be less than applicant's estimates. Therefore, staff expects the secondary particulate matter impacts from ammonia emissions would be less than significant and would not require additional mitigation or offsets.

The project's operations would not result in a cumulatively considerable net increase of any criteria pollutant, and these impacts would be less than significant.

TABLE 4.3-6 CRITERIA POLLUTANT EMISSIONS FROM PROJECT OPERATION

Source Type	ROG/VOC	CO	NOx	SO_2	PM10	PM2.5
	Annual Emissions (tpy)					
Phase I Miscellaneous Operational Emissions	2.52	1.49	0.55	0.00	0.31	0.11
Phase II Miscellaneous Operational Emissions	3.90	1.89	0.81	0.01	0.38	0.14
Standby Generators (Testing Only) [a,b]	1.15	21.39	12.54	0.04	0.12	0.12
Proposed Offsets [c]	--	--	(-12.54)	--	--	--
Total Phase I Net Emissions	3.20	14.10	-4.60	0.03	0.38	0.18
Total Full Buildout Net Emissions	5.05	23.28	0.82	0.05	0.50	0.26
BAAQMD Annual Significance Thresholds	10	--	10	--	15	10
Net Emissions Exceed BAAQMD Threshold? (Y/N)	N	N/A	N	N/A	N	N
	Average Daily Emissions (lbs/day) [c]					
Phase I Miscellaneous Operational Emissions	13.79	8.19	3.02	0.03	1.70	0.59
Phase II Miscellaneous Operational Emissions	21.38	10.35	4.45	0.04	2.07	0.76
Standby Generators (Testing Only) [a,b]	6.31	117.19	68.74	0.23	0.68	0.68
Proposed Offsets [c]	--	--	(-68.74)	--	--	--
Total Phase I Net Emissions	17.51	77.25	-25.19	0.16	2.10	0.99
Total Full Buildout Net Emissions	27.69	127.54	4.47	0.26	2.74	1.44
BAAQMD Average Daily Significance Thresholds	54	--	54	--	82	54
Net Emissions Exceed BAAQMD Threshold? (Y/N)	N	N/A	N	N/A	N	N

Notes:
[a] The annual emissions of the standby generators are estimated assuming readiness testing and maintenance operation would occur 50 hours per year per engine.
[b] The NOx emissions for readiness testing and maintenance are estimated using a composite emission factor where the first 15 minutes of every hour of operation are assumed to emit at Tier 2 emissions levels, with the remainder of the hour emitting at Tier 4 emission levels.
[c] The average daily emissions and offsets are based on the annual emissions and offsets averaged over 365 days per year. A NOx offset ratio of 1:1 was used as the standby generators would emit less than 35 tpy (BACT 2020a).
Sources: DayZenLLC 2021a, DayZenLLC 2022q with calculation spreadsheets, CEC staff analysis

Overlap of SVY06 Construction with SVY05 Operation

Less Than Significant with Mitigation Incorporated. Readiness and maintenance testing of engines installed during Phase I will proceed concurrently with Phase II construction, resulting in an overlap period where emissions from construction activity and emissions

from readiness and maintenance will both occur. The overlap period would commence in February 2025 and end in May 2026, spanning a total of 16.5 months. 16 2-MW C3156E engines and 1 1-MW C32 engine would be readiness and maintenance tested during this period, each for a total of 68.75 hours (assuming annual operation of 50 hours).

Total emissions from Phase II construction activity are characterized by two groups of sources: exhaust emissions and fugitive dust emissions, which were obtained from the CalEEMod construction analysis discussed above. Exhaust emissions from all 17 emergency engines were annualized over the 16.5 month overlap period to determine per year emission rates. **Table 4.3-7** shows the annual and average daily emissions for the overlap period.

Project operation during the overlap period would not result in a cumulatively considerable net increase of any criteria pollutant, and these impacts would be less than significant.

TABLE 4.3-7 CRITERIA POLLUTANT EMISSIONS FROM READINESS AND MAINTENANCE TESTING OF PHASE I ENGINES AND PHASE II CONSTRUCTION ACTIVITY

Source Type	ROG/VOC	CO	NOx	SO_2	PM10	PM2.5
	Annual Emissions (tpy)					
Annualized C3516E Emissions	0.50	9.22	5.41	0.02	0.053	0.053
Annualized C32 Emissions	0.01	0.21	0.12	0.0004	0.001	0.001
Phase II Maximum Annual Construction Emissions	1.39	3.77	0.73	0.01	0.31	0.15
Total Annualized Overlap Period Emissions	1.90	13.21	8.30	0.03	0.37	0.20
Proposed Offsets [c]	--	--	(-12.54)	--	--	--
Total Overlap Period Net Emissions	1.90	13.21	-4.25	0.03	0.36	0.20
BAAQMD Annual Significance Thresholds	10	--	10	--	15	10
Net Emissions Exceed BAAQMD Threshold? (Y/N)	N	N/A	N	N/A	N	N
	Average Daily Emissions (lbs/day) [c]					
Maximum Daily Overlap Engine Emissions	4.97	92.24	54.10	0.18	0.53	0.53
Maximum Average Daily Phase II Overlap Emissions	10.52	5.55	28.58	0.06	2.35	1.10
Proposed Offsets [c]	--	--	(-68.74)	--	--	--
Total Overlap Period Net Emissions	15.48	97.79	13.95	0.24	2.88	1.63
BAAQMD Average Daily Significance Thresholds	54	--	54	--	82	54
Average Emissions Exceed BAAQMD Threshold? (Y/N)	N	N/A	N	N/A	N	N

TABLE 4.3-7 CRITERIA POLLUTANT EMISSIONS FROM READINESS AND MAINTENANCE TESTING OF PHASE I ENGINES AND PHASE II CONSTRUCTION ACTIVITY

Source Type	ROG/VOC	CO	NOx	SO_2	PM10	PM2.5
	Annual Emissions (tpy)					

Notes:
[a] The annual emissions of the standby generators are estimated assuming readiness testing and maintenance operation would occur 50 hours per year per engine.
[b] The NOx emissions for readiness testing and maintenance are estimated using a composite emission factor where the first 15 minutes of every hour of operation are assumed to emit at Tier 2 emissions levels, with the remainder of the hour emitting at Tier 4 emission levels.
[c] The average daily emissions and offsets are based on the annual emissions and offsets averaged over 365 days per year. A NOx offset ratio of 1:1 was used as the standby generators would emit less than 35 tpy (BACT 2020a).
Sources: DayZenLLC 2021a, DayZenLLC 2022q with calculation spreadsheets, CEC staff analysis

Cumulative Impacts

Less Than Significant with Mitigation Incorporated. According to the 2017 BAAQMD CEQA Guidelines (BAAQMD 2017b), in developing thresholds of significance for air pollutants (as shown in **Table 4.3-1**), BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

As discussed above, with the implementation of mitigation measure **AQ-1** during construction and NOx offsets for readiness testing and maintenance, the project emissions would not exceed the BAAQMD significance thresholds. Therefore, the project would not result in a cumulatively considerable net increase of any criteria pollutant, and these impacts would be less than significant with mitigation incorporated.

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

This section quantifies the ambient air quality pollutant concentrations caused by the project and determines whether sensitive receptors could be exposed to substantial pollutant concentrations.

This section is comprised of separate discussions addressing impacts from criteria pollutants in staff's Air Quality Impact Analysis (AQIA) and impacts from TACs in staff's HRA. Staff's AQIA discusses criteria pollutant impacts from construction and operation. The section also discusses issues associated with potential emergency operations. Staff's HRA discusses the results of TACs for both construction and operation (readiness testing and maintenance) and cumulative sources.

Air Quality Impact Analysis for Criteria Pollutants

Staff considers any new AAQS exceedance and substantial contribution to any existing AAQS exceedance caused by the project's emissions to be substantial evidence of

potentially significant impacts that would require the evaluation of potential mitigation measures. In this case, the existing background levels of PM10 and PM2.5 already exceed the AAQS.

Construction

Less Than Significant with Mitigation Incorporated. Construction emissions of criteria pollutants are shown in **Table 4.3-5** under criterion "b" of the environmental checklist. Emissions during project construction would not exceed significance thresholds for construction activities, as established in the BAAQMD CEQA Guidelines. With the staff recommendation to implement the applicant proposed mitigation measure (**AQ-1**), shown in Section 2.4.1 of the SPPE Application, to control fugitive dust, construction emissions would not exceed the BAAQMD significance thresholds (DayZenLLC 2021a, pg. 52; TN 240910). Although project construction emissions would fall below the emissions thresholds, this section of the staff analysis explores the ambient air quality impacts of criteria pollutant emissions during construction to evaluate whether substantial pollutant concentrations could occur.

The application provided the modeled ambient air quality concentrations caused by the construction activities, including demolition of the existing buildings at 2400 Ringwood Avenue and 1849 Fortune Drive. The construction phase modeling includes emissions from offroad equipment, heavy-duty trucks, other vehicles used for transport, and fugitive dust (DayZenLLC 2021a, pg. 94; TN 240910 and DayZenLLC 2021d; TN 240911-1). Staff reviewed the applicant's dispersion modeling files and agreed with the inputs used by the applicant and the outputs from the model for the construction AQIA for all criteria pollutants. To verify the results, staff conduced independent analysis for PM10, PM2.5, and NO_2.

The applicant's AQIA uses the U.S. EPA preferred and recommended dispersion model, American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD [versions 21112 and 22112]) to estimate ambient air quality impacts. Staff's independent runs to verify the applicant's results used the newer version of AERMOD (version 22112) to arrive at similar results. For demonstrating compliance with the ambient air quality standards in a near-field context (within 6 miles or 10 kilometers of a new source) and for considering the aerodynamic effects of building downwash, AERMOD is routinely required for regulatory applications, as described in U.S. EPA's *Guideline on Air Quality Models* (U.S. EPA 2017).

Meteorological Data. The applicant processed a five-year (2013-2017) record of hourly meteorological data collected at the Norman Y. Mineta San Jose International Airport surface station, approximately two miles north of the project site, and this sufficiently represents the meteorology at the project site for use in AERMOD. The concurrent daily upper air sounding data from the Oakland International Airport station were also included. The applicant's consultant obtained the met data from BAAQMD, and BAAQMD used AERMET (version 18081) to arrive at a meteorological data record for direct use in AERMOD (DayZenLLC 2021a, pg. 96; TN 240910).

Modeling Assumptions. The applicant modeled the construction fugitive dust emissions and off-road equipment and vehicle exhaust emissions from the project's onsite activities. The applicant's dispersion modeling analysis divided the construction activities into emissions into two phases. The first phase includes construction over the entire site (DayZenLLC 2021a, pg. 99; TN 240910) and demolition of the existing building on the SVY05 site, and the second phase considers an overlap period of 16.5 months when the backup generator engines installed at SVY05 may be readiness and maintenance tested during simultaneous construction of SVY06 (DayZenLLC 2021a, pg. 108; TN 240910). By assessing each phase separately, the modeling reflects the applicant's proposed phasing that would allow commencing operation of SVY05 before starting construction or operation of the SVY06 building, the separate assessment of the overlap period includes all project operational activities at SVY05 occurring concurrently with construction activities at SVY06.

For construction over the entire site, the applicant modeled the equipment exhaust emissions as an array of 59 combustion point sources placed at regular 25-meter intervals within the construction area of SVY05 and SVY06. Construction fugitive dust emissions were modeled as an area source polygon covering the entire construction area (DayZenLLC 2021a, pg. 99; TN 240910).

The overall criteria air pollutant emissions during construction include some offsite vehicle use for materials transport and worker travel. These emissions were conservatively included by the applicant with the modeling of onsite sources; this overpredicts the impacts near the project site boundary. The applicant's dispersion modeling of construction activities assume that the equipment and vehicle exhaust emissions and fugitive dust emissions could be released onsite 10 hours per day, between 7:00 a.m. to 5:00 p.m. (DayZenLLC 2021a, pg. 99; TN 240910).

Table 4.3-7 shows the impacts of the project during the construction period. The project impact column shows the worst-case impacts of the project from modeling. The background column shows the highest concentrations, or the three-year averages of the highest concentrations for 24-hour PM2.5 and federal 1-hour NO_2 and SO_2 standards according to the forms of these standards, from the prior three years (2018-2020) from the Jackson Street station. The background PM10 and PM2.5 concentrations are shown in **bold** because they already exceeded the corresponding limiting standards. The total impact column shows the sum of the existing background condition plus the maximum impact predicted by the modeling analysis for construction. The limiting standard column combines CAAQS and NAAQS, whichever is more stringent.

TABLE 4.3-7 MAXIMUM AMBIENT AIR QUALITY IMPACTS DURING CONSTRUCTION (µg/m³)

Pollutant	Averaging Time	Project Impact	Background	Total Impact	Limiting Standard	Percent of Standard
PM10 [a]	24-hour	7.10	**137.1**	**144**	50	**288%**
	Annual	2.09	**24.8**	**27**	20	**134%**
PM2.5 [a]	24-hour	2.28	**73.4**	**76**	35	**216%**
	Annual	0.90	**12.9**	**14**	12	**115%**
CO	1-hour	32	2,857	2,889	23,000	13%
	8-hour	13	2,400	2,413	10,000	24%
NO_2 [b]	State 1-hour	6.07	162.5	169	339	50%
	Federal 1-hour	3.04	111.3	114	188	61%
	Annual	0.58	22.6	23	57	41%
SO_2	State 1-hour	0.070	37.9	38	655	6%
	Federal 1-hour	0.050	7.8	8	196	4%
	24-hour	0.012	3.9	4	105	4%

Notes: Concentrations in **bold** type are those that exceed the limiting ambient air quality standard.
[a] Fugitive PM mitigation from twice per day watering of exposed road surfaces was not included in the modeling.
[b] The NO_2 impacts are evaluated using ARM2. The state 1-hour NO_2 total impacts include the maximum modeled project impact combined with maximum NO_2 background value. The federal 1-hour NO_2 total impacts include the 98th percentile daily maximum 1-hour background NO_2.
Source: DayZenLLC 2021a, Table 4.3-17; TN 240910.

Table 4.3-7 shows that the impacts from project construction would be below the limiting standards for CO, NO_2, and SO_2. **Table 4.3-7** also shows that the existing 24-hour and annual PM10 background concentrations are already above the limiting standards. The project would, therefore, contribute to existing exceedances of the 24-hour and annual PM10 CAAQS. The maximum modeled 24-hour PM10 concentration of 7.10 µg/m³ during construction would exceed the U.S. EPA PM10 SILs of 5 µg/m³ for 24-hour impacts, and the maximum modeled annual PM10 concentration of 2.09 µg/m³ would exceed the PM10 SILs of 1 µg/m³ for annual impacts. The results provided in **Table 4.3-7** are maximum impacts predicted to occur primarily due to fugitive dust at the southern and eastern project fence line. Sensitive receptors nearby include the residents 140 feet north of the project site, and the nearest school is over 1,000 feet away from the project fence line (DayZenLLC 2021a, pg. 101; TN 240910).

The PM10 impacts would decrease rapidly as distance increases from the area of ground disturbance. Along the northern property boundary (Trade Zone Blvd.), 24-hour PM10 impacts would be below the U.S. EPA PM10 SIL of 5 µg/m³ for all locations beyond 50 feet north of the fence line, and annual PM10 impacts would be below the PM10 SIL of 1 µg/m³ at the northern fence line. The maximum 24-hour PM10 impacts at the nearest residential receptors would be approximately 4.1 µg/m³ and less than the corresponding SIL. Construction impacts are short term and would be reduced with the implementation of the applicant proposed mitigation (**AQ-1**) (DayZenLLC 2021a, pg. 87; TN 240910) which includes the use of watering to significantly reduce fugitive dust generation. With mitigation, the PM10 impacts of the project during construction would be less than significant.

Similarly, **Table 4.3-7** also shows that the existing 24-hour and annual PM2.5 background concentrations are already above the limiting standards. The project would therefore contribute to existing exceedances of the 24-hour and annual PM2.5 standards. The maximum 24-hour PM2.5 impacts of 2.28 µg/m^3 would exceed the 24-hour PM2.5 SILs of 1.2 µg/m^3. Similarly, at the project fence line, the annual average PM2.5 impact during construction of 0.90 µg/m^3 would be greater than the BAAQMD significance threshold of 0.3 µg/m^3 and greater than the annual PM2.5 SILs for annual impacts of 0.2 µg/m^3 (US EPA 2018a). The maximum modeled PM2.5 impact would occur at the southern and eastern project fence lines and would decrease rapidly with distance. Along the northern property boundary (Trade Zone Blvd.), 24-hour PM2.5 impacts would be less than 1.2 µg/m^3 and annual PM2.5 impacts would be less than 0.2 µg/m^3 during construction for all locations beyond 115 feet north of the fence line.

The nearest sensitive receptor (i.e., the nearest residential areas) is about 140 feet north of the fence line. Because the maximum modeled annual PM2.5 impacts would be less than the BAAQMD CEQA Guidelines significance threshold of 0.3 µg/m^3 and less than the U.S. EPA annual PM2.5 SILs level of 0.2 µg/m^3 at all sensitive receptors, the PM2.5 impacts of the project during construction would be less than significant.

Project construction would not expose sensitive receptors to substantial criteria pollutant concentrations, and this impact would be less than significant.

Operation

Less Than Significant Impact. The AQIA for project operation includes emissions from the project's diesel gensets during readiness testing and maintenance use to compare worst-case ground-level impacts with established state and federal AAQS. No other on-site stationary emission sources, such as natural gas combustion devices, are proposed. The applicant's modeling analysis is described in more detail below.

The applicant's AQIA compares worst-case ground-level impacts resulting from the project operation with established state and federal AAQS. Staff reviewed the applicant's dispersion modeling files, and staff agrees with the inputs used by the applicant and the outputs from the model for the AQIA.

Modeling Assumptions. Stack parameters (e.g., stack height, exit temperature, stack diameter, and stack exit velocity) were based on the parameters given by the engine manufacturer and the applicant. The 39 gensets include 36 gensets for the data center suites, two (2) house generators, and one generator for supporting the advanced manufacturing building. All generators would be located between the SVY05 and SVY06 buildings near the center of the site. The design includes redundancy so that six of the data center generators are redundant (DayZenLLC 2021a, pg. 13; TN 240910). Each of the 36 larger engine-generator sets would emit from a point with a stack height of 18.59 meters (61 feet above grade) and diameter of 0.51 meters (20 inches), and the three smaller generators would have a stack height of 5.49 meters and diameter of 0.20 meters (in electronic modeling files supplied with DayZenLLC 2022q; TN 246369).

All engines could be tested or used at any load condition. The applicant's analysis is supported by a screening review of engines at five different load conditions representing 10, 25, 50, 75, and 100 percent load settings to determine that the worst-case concentrations occur during 100 percent load (DayZenLLC 2022f, pg. 10; TN 243473, Response to Data Request 16).

In the applicant's modeling analysis, the readiness testing and maintenance scenario is based on one generator undergoing testing at a time (in electronic modeling files supplied with DayZenLLC 2022q; TN 246369). During these tests, the engine would warm up from an uncontrolled state during the first 15 minutes to a fully controlled state for the remainder of the one-hour test (DayZenLLC 2021d, in Table AQ1-1; TN 240911-1).

The applicant proposes to accept a permit condition from BAAQMD to limit testing to no more than one generator at a time (DayZenLLC 2022f, pg. 9; TN 243473, Response to Data Request 14) and a limit of testing a maximum of 8 engines on any given day (Response to Data Request 10).

Additionally, the modeling also reflects a commitment to limit routine readiness testing to occur within certain hours of the day. The applicant proposes to accept a permit condition from BAAQMD to limit readiness testing to a daily 12-hour period between 7:00 a.m. and 7:00 p.m. daily (DayZenLLC 2022q; TN 246369).

Refined Modeling Analyses. The modeling considers the use of the diesel-fired gensets in all proposed readiness testing and maintenance scenarios. The AQIA for project operation includes generator operating assumptions that vary depending on the averaging period of the applicable CAAQS or NAAQS. Refined modeling for 1-hour averaging period considers each single generator could be used at 100 percent load.

Modeling for comparison to the short-term NAAQS follows the applicable multi-year statistical forms (one-hour NO_2 and SO_2 and 24-hour PM2.5). Similarly, for the 1-hour NO_2 and SO_2 CAAQS impacts analyses, the applicant reported the highest 1-hour NO_2 and SO_2 modeled concentrations in a manner consistent with the forms of the CAAQS.

Modeled 1-hour NO_2 concentrations reflect use of the Ambient Ratio Method Version 2 (ARM2), which assumes an ambient equilibrium between NO and NO_2, as a second-tier approach for NO_2 analysis as defined in U.S. EPA's *Guideline on Air Quality Models* (U.S. EPA 2017). The approach uses a default minimum ambient NO_2/NOx ratio of 0.5 and a maximum ambient ratio of 0.9.

For analysis relative to the state one-hour NO_2 standard, the modeled NO_2 results from AERMOD using ARM2 are added to the maximum 1-hour background NO_2 value from the Jackson Street monitoring site (2018-2020) to arrive at the total NO_2 impact for the 1-hour NO_2 CAAQS analysis (DayZenLLC 2022q, Table 2; TN 246369). Staff independently confirmed this portion of the analysis and found results for the 1-hour NO_2 CAAQS slightly lower than the applicant's reported impact. For the 1-hour NO_2 NAAQS analysis, the applicant averaged the yearly emissions of the intermittent testing (DayZenLLC 2022q,

Table 2; TN 246369). Staff independently modeled the hourly NO_2 emissions without annual averaging to arrive at the 8th-highest of the daily maximum 1-hour values, which is added to day 98th percentile daily maximum 1-hour background NO2 concentration, consistent with U.S. EPA guidance for the NO_2 NAAQS (U.S. EPA 2011). Staff's review for the 1-hour NO_2 standards confirmed the applicant's ARM2 runs (using AERMOD version 22112) are representative of worst-case NO_2 1-hour results.

Modeling for comparison with the 24-hour PM10 and PM2.5 standards assumes that eight engines could be tested within any given 24-hour period (DayZenLLC 2021a, pg. 89; TN 240910 and DayZenLLC 2021d, Table AQ1-1; TN 240911-1).

Table 4.3-8 shows the maximum impacts from project operation, including readiness testing and maintenance. The project impact column shows the worst-case impacts of the project from modeling. The background column shows the highest (or three-year averages for the 24-hour PM2.5 and federal 1-hour SO_2 standards) of the background concentrations from the last three years of representative data (2018-2020) from the Jackson Street station. The background PM10 and PM2.5 concentrations are shown in **bold** because they already exceeded the corresponding limiting standards. Except for the 1-hour NO_2 total impacts, the total impact column shows the sum of the existing background condition plus the maximum impact predicted by the modeling analysis for readiness testing and maintenance. The limiting standard column combines CAAQS and NAAQS, whichever is more stringent.

Table 4.3-8 shows that the project's stationary sources would not cause exceedances of the CO, NO_2, or SO_2 standards. **Table 4.3-8** also shows that the existing PM10 and PM2.5 background concentrations are already above the limiting standards. The project would, therefore, contribute to existing exceedances of the PM10 and PM2.5 standards.

TABLE 4.3-8 MAXIMUM AMBIENT AIR QUALITY IMPACTS DURING OPERATION (µg/m³)

Pollutant	Averaging Time	Project Impact	Background	Total Impact	Limiting Standard	Percent of Standard
PM10 [a]	24-hour	0.33	**137.1**	**137**	50	**275%**
	Annual	0.032	**24.8**	**25**	20	**124%**
PM2.5 [a]	24-hour	0.24	**73.4**	**74**	35	**210%**
	Annual	0.032	**12.9**	**13**	12	**108%**
CO	1-hour	270	2,857	3,127	23,000	14%
	8-hour	208	2,400	2,608	10,000	26%
NO_2 [b,c]	State 1-hour	91.0	162.5	253	339	75%
	Federal 1-hour	65.0	111.3	176	188	94%
	Annual	2.96	22.6	26	57	45%
SO_2 [c]	State 1-hour	0.52	37.9	38	655	6%
	Federal 1-hour	0.52	7.8	8	196	4%
	24-hour	0.11	3.9	4	105	4%

Notes: Concentrations in **bold** type are those that exceed the limiting ambient air quality standard.

[a] The 24-hour PM10 and PM2.5 impacts are based on the daily emissions of 8 engines undergoing readiness testing and maintenance in any given day.
[b] The NO_2 impacts are evaluated using ARM2.
[c] Impacts for the 1-hour NO_2 and SO_2 CAAQS are based on the maximum 1-hour modeled concentrations as these standards are "values that are not to be exceeded." Impacts for the 1-hour statistical-based NO_2 NAAQS use modeled impacts and background concentrations that reflect the form of the standard.
Source: DayZen LLC 2022q, Table 1; TN 246369.

The modeled PM10 concentrations from the project's operation in **Table 4.3-8** are well below the U.S. EPA PM10 SILs of 5 µg/m^3 for 24-hour impacts and 1 µg/m^3 for annual impacts. Similarly, the maximum modeled PM2.5 concentrations from project operation would not exceed the U.S. EPA PM2.5 SILs of 1.2 µg/m^3 for 24-hour impacts at any location. **Table 4.3-8** also shows that the annual PM2.5 project impacts of 0.032 µg/m^3 would not exceed the U.S. EPA PM2.5 of 0.2 µg/m^3 for annual impacts (US EPA 2018a) or the project-level BAAQMD CEQA Guidelines threshold for annual-average PM2.5 of 0.3 µg/m^3, for risk and hazards.

Table 4.3-8 shows that use of the diesel-fired gensets in all proposed readiness testing and maintenance scenarios would not expose sensitive receptors to substantial pollutant concentrations, and this impact would be less than significant.

Overlap of SVY06 Construction with SVY05 Operation

Less Than Significant with Mitigation Incorporated. Construction emissions during the period of 16.5 months when construction of SVY06 may overlap with readiness and maintenance testing of the backup generator engines installed at SVY05 are shown in **Table 4.3-7** under criterion "b" of the environmental checklist. As with the initial period of overall site construction, emissions caused by construction of SVY06 would be reduced by the applicant proposed mitigation (**AQ-1**). Similar to the assessment of construction over the entire site, the modeling for the overlap period includes point sources for construction equipment exhaust and an area source polygon within the area of SVY06 (DayZenLLC 2021a, pg. 110; TN 240910).

Table 4.3-9 shows the maximum ambient air quality impacts of criteria pollutants from operation, including readiness testing and maintenance, of engines at SVY05 and the advanced manufacturing building overlapping with construction of the SVY06 building. During this period, the project's stationary sources and the proposed simultaneous onsite construction emissions would not cause exceedances of the CO, NO_2, or SO_2 standards. **Table 4.3-9** shows that the existing PM10 and PM2.5 background concentrations are already above the limiting standards. During this overlapping phase of construction with operation, the project would contribute to existing exceedances of the PM10 and PM2.5 standards.

TABLE 4.3-9 MAXIMUM AMBIENT AIR QUALITY IMPACTS DURING OVERLAP OF SVY06 CONSTRUCTION AND SVY05 OPERATION (µg/m³)

Pollutant	Averaging Time	Project Impact	Background	Total Impact	Limiting Standard	Percent of Standard
PM10 [a]	24-hour	12.52	**137.1**	**150**	50	**299%**
	Annual	4.12	**24.8**	**29**	20	**145%**
PM2.5 [a]	24-hour	4.19	**73.4**	**78**	35	**222%**
	Annual	1.49	**12.9**	**14**	12	**120%**
CO	1-hour	281	2,857	3,138	23,000	14%
	8-hour	219	2,400	2,619	10,000	26%
NO_2 [b]	State 1-hour	81.1	162.5	244	339	72%
	Federal 1-hour	65.4	111.3	177	188	94%
	Annual	1.43	22.6	24	57	42%
SO_2	State 1-hour	0.51	37.9	38	655	6%
	Federal 1-hour	0.51	7.8	8	196	4%
	24-hour	0.12	3.9	4	105	4%

Notes: Concentrations in **bold** type are those that exceed the limiting ambient air quality standard.
[a] Fugitive PM mitigation from twice per day watering of exposed road surfaces was not included in the modeling.
[b] The NO_2 impacts are evaluated using ARM2.
Source: DayZenLLC 2022q, Table 3; TN 246369), with independent staff analysis of NO_2.

The results show the overall highest (worst-case) fence line impacts would occur during the overlapping period of construction at locations along the southern and eastern fence line. The overlap period includes operational activities after the startup of SVY05. Because construction in the overlap period would be focused on the southern portion of the site, receptors near SVY05 and the northern fence line would experience lower impacts during the overlap period than those that occur when the entire site is in construction.

The maximum modeled 24-hour PM10 concentration of 12.52 µg/m³ during the overlapping construction of SVY06 and operation of SVY05 would exceed the U.S. EPA PM10 SILs of 5 µg/m³ for 24-hour impacts, and the maximum modeled annual PM10 concentration of 4.12 µg/m³ would exceed the PM10 SILs of 1 µg/m³ for annual impacts. The results provided in **Table 4.3-9** are maximum impacts predicted to occur primarily due to fugitive dust at the project boundary of the SVY06 construction site.

The PM10 impacts would decrease rapidly with increasing distance from the area of ground disturbance. Fugitive dust emissions during construction of SVY06 would occur mostly within the southern portion of the site. The impact to the southern property boundary would be greater than the impact to the northern property boundary (Trade Zone Blvd.) and greater than during overall site construction. For all locations north of the fence line and north of Trade Zone Blvd., the 24-hour PM10 impact would be below 2 µg/m³, and the annual PM10 impact would be less than 0.1 µg/m³. Similarly, along the northern property boundary (Trade Zone Blvd.), 24-hour PM2.5 impacts would be less than 0.6 µg/m³, and annual PM2.5 impacts would be less than 0.05 µg/m³ during the overlap period.

The period of overlapping construction and operation would be considered short term. Impacts during any construction activities would be reduced with the implementation of the applicant proposed mitigation (**AQ-1**) which includes the use of watering to significantly reduce fugitive dust generation. As with the initial construction period, the PM10 and PM2.5 impacts of the project during the period of overlapping construction and operation at all sensitive receptors would be less than the corresponding U.S. EPA SILs. Therefore, the PM10 and PM2.5 impacts of the project during overlapping construction and operation would be less than significant.

Localized CO Concentrations. Engine exhaust may elevate localized CO concentrations, resulting in "hot spots." Receptors exposed to these CO hot spots may have a greater likelihood of developing adverse health effects. CO hot spots are typically observed at heavily congested intersections where a substantial number of vehicles idle for prolonged durations throughout the day. BAAQMD screening guidance indicates that a project would not exceed the CO significance threshold if a project's traffic projections indicate traffic levels would not increase at any affected intersection to more than 44,000 vehicles per hour or at any affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (BAAQMD 2017b).

The proposed project would generate a small number of vehicle trips to the site. These trips would include workers and material and equipment deliveries. It is unlikely that the addition of vehicle trips from the project on any roadway in the vicinity of the project site would result in an exceedance of the BAAQMD screening threshold. As a result, the additional vehicle trips associated with the project would result in a negligible effect on CO concentrations in the vicinity of the project site.

Table 4.3-7, **Table 4.3-8**, and **Table 4.3-9** show the maximum CO concentrations resulting from the project's onsite construction activities and operation. The AQIA modeling results confirm that impacts caused by the project sources would be well below the limiting standards and BAAQMD CEQA Guidelines significance thresholds of 20.0 ppm (23,000 µg/m^3) for 1-hour average concentrations and 9.0 ppm (10,000 µg/m^3) for 8-hour average concentrations.

Localized CO impacts during construction and operation, including readiness testing and maintenance, would not expose sensitive receptors to substantial pollutant concentrations, and this impact would be less than significant.

Emergency Operations Impacts for Criteria Pollutants

This section addresses the potential for emergency situations that could trigger the unplanned operation of the project's diesel-fired gensets. Emergency use of the gensets could occur in the event of a power outage or other disruption, upset, or instability that triggers a need for SVYBGF to provide emergency backup power.

The air quality impacts of genset operation during emergencies are not quantified below because the impacts of emergency operations are typically not evaluated during facility

permitting and local air districts do not normally conduct an air quality impact assessment of such impacts. CEC staff assessed the likelihood of emergency events but finds that modeling the air quality impacts of emergency operations would require a host of unvalidated, unverifiable, and speculative assumptions about when and under what circumstances such a hypothetical emergency would occur. Such a speculative analysis is not required under CEQA (CEQA Guidelines, CCR, Tit. 14, § 15064(d)(3) and § 15145), and, most importantly, would not provide meaningful information by which to determine project impacts.

Emissions that occur during the emergency use of the gensets would not occur on a regular or predictable basis (see **Appendix B** for more information). During the permitting process, BAAQMD policy requires facilities to presume that each of their generators will experience 100 hours per year of emergency operation when calculating their PTE for determining the applicability of certain permitting regulations (BAAQMD 2019).

Although normally excluded from ambient air quality impact analysis during permit review, BAAQMD comments on the NOPs for the CA3 Backup Generating Facility and the Gilroy Backup Generating Facility, requested that this air quality analysis include various scenarios of backup power generation operations beyond routine testing and maintenance (BAAQMD 2021b, BAAQMD 2021c). The comments from BAAQMD provided a review of data centers that initiated operation of diesel engines for "non-testing/non-maintenance" purposes, for the purpose of informing staff's consideration of scenarios of backup power generation operations beyond routine testing and maintenance (BAAQMD 2021b, BAAQMD 2021c).

Staff reviewed the BAAQMD comments regarding the use of diesel engines for "non-testing/non-maintenance" purposes and confirmed that these types of events are infrequent, irregular, and unlikely and the resulting emissions are not easily predictable or quantifiable. The BAAQMD comments showed that extended durations of standby generator engines use occurred for "non-testing/non-maintenance" purposes, mostly due to extreme events within the 13-month record of the data. The 13-month period of BAAQMD's review (September 1, 2019, to September 30, 2020) included the implementation of Pacific Gas and Electric's Public Safety Power Shutoff (PSPS), severe wildfires, several California Independent System Operator (CAISO)-declared emergencies, and winter storms.

In staff's analysis of BAAQMD's review, without excluding the extreme events, 1,877 engine-hours of diesel engine use occurred at 20 data centers for "non-testing/non-maintenance" purposes (less than half of the 45 facilities included in the review, and less than a third of such facilities under BAAQMD's jurisdiction). BAAQMD's review covered 288 individual diesel engines that operated over a 13-month record. Because the backup generator engines were collectively available for over 2.74 million engine-hours during the 13-month period (288 engines * 9,504 hours in the 13-month record), and they were used for "non-testing/non-maintenance" purposes for 1,877 engine-hours, at those facilities where operation occurred, the engines entered into emergency operations

during 0.07 percent of their available time (1,877 / 2.74 million). Staff's analysis of BAAQMD's information found that the average runtime for each diesel backup generator engine per event in BAAQMD's review was approximately 5.0 hours. Based on this data, staff determined that the emergency use of the standby generator engines was infrequent and of short duration.

Due to the number of factors that need to be considered, using an air quality model to evaluate ambient air quality impacts during emergency operations would require unnecessary speculation and would render the results of any such exercise too speculative to be meaningful. This remains especially true when neither the CEC nor any other agency has established or used in practice a threshold of significance by which to interpret air quality modeling results from emergency operations. Emergency operation would be very infrequent, and emergency operations would not occur routinely during the lifetime of the facility. Accordingly, the potential for any adverse impacts to ambient air quality concentrations would be a very-low probability event.

Thus, staff concludes that assessing the impacts of emergency operation of the gensets would be speculative due to the infrequent, irregular, and unplanned nature of emergency events. Emissions and impacts during emergency operation are not easily predictable or quantifiable.

Because of the infrequent nature of emergency conditions and the reliability of the grid as detailed in **Appendix B**, the project's emergency operation would be unlikely to expose sensitive receptors to substantial concentrations of criteria air pollutants.

Cumulative Impacts for Criteria Pollutants

Under environmental checklist criterion "b" above, staff concludes that the project emissions would not exceed the BAAQMD significance thresholds with the implementation of **AQ-1** during construction and NOx offsets for readiness testing and maintenance. Therefore, the project would not result in a cumulatively considerable net increase of any criteria pollutant, and these impacts would be less than significant with mitigation incorporated.

Health Risk Assessment for Toxic Air Contaminants

The HRA for the project was conducted separately for (1) the period of the project's demolition, excavation, and construction, (2) the period of operation, which consists of readiness testing and maintenance, and (3) an overlap period where engines constructed in Phase 1 will be readiness and maintenance tested during the Phase 2 construction period. A separate discussion summarizes the risk and hazards for the project in a cumulative HRA that includes the project's impact with the impacts of existing sources in the area.

The HRA estimated risks of cancer, non-cancer chronic exposure, and non-cancer acute exposure for sensitive receptors, including the maximally exposed individual resident (MEIR), maximally exposed school receptor (MESR), maximally exposed daycare receptor

(MEDR), and the maximally exposed recreational receptor (MERR). As required by the 2015 OEHHA Guidance, sensitive receptor cancer risks were estimated assuming exposure beginning in the third trimester of pregnancy (OEHHA 2015).

Some exposure assumptions:

- For construction and the overlap period, off-site residents were assumed to be present at one location for the entire duration of the period. For operation, off-site residents were assumed to be present at one location for a 30-year period.
- Off-site school, childcare, and recreational receptors were conservatively examined using the same exposure durations as off-site resident receptors.
- In accordance with Section 2.1.3.2 of the BAAQMD HRA Guidelines (BAAQMD 2016), the exposure duration for short-term modeling periods (both the construction period and the overlap period) was set to 3 years.
- Health effects values for toxic air contaminants provided by BAAQMD were used (BAAQMD 2020b).
- Fraction of Time at Home (FAH) for all resident, school, childcare, and recreational receptors was set to values recommended by BAAQMD for residents not within a 1 in a million cancer risk isopleth. (BAAQMD 2020b).
- Flagpole height of 1.5 m was used for all receptors, per BAAQMD HRA Modeling Protocol Section 3.10 (BAAQMD 2020b).

Construction HRA

Less Than Significant Impact. Project construction is expected to occur over two phases, with Phase I construction lasting for about 16-19 months, and Phase II construction lasting for 16 months (DayZenLLC 2021a, pg. 45; DayZenLLC 2021d, Table AQ4-2). Emissions from the approximately 32-month construction period were estimated using CalEEMod (DayZenLLC 2021a, pg. 86). Construction emissions are a result of construction equipment, material movement, paving activities, and on- and off-site vehicle trips, such as material haul trucks, worker commutes, and delivery vehicles (DayZenLLC 2021a, pg. 86). Construction health risk impacts are based on the assumption that all construction off-road equipment meets Tier 4 engine standards and that all exposed areas in the site would undergo watering twice a day. The risks and health impacts reported are for the entire duration of construction period. Only DPM emissions from off-road construction equipment are analyzed (DayZenLLC 2021a, Table 4.3-21).

Staff reviewed the applicant's modeling files and agrees with the inputs used by the applicant and the outputs from the model for carcinogenic and chronic health risks. There are no acute risks analyzed (DayZenLLC 2021e, Table 4.3-21) for the construction HRA. Acute (non-cancer) health risks were not estimated as there is no acute inhalation REL for DPM. The results of the construction HRA are presented in **Table 4.3-10**. It shows that the maximum cancer risk impact, chronic HIs, and PM2.5 concentrations at the MEIR,

MEDR, MESR, and MERR during the construction of the project would be less than BAAQMD's significance thresholds. Therefore, staff concluded that the health risks of the project construction would be a less than significant impact.

Note that the risk values shown in **Table 4.3-10** are the highest of those modeled for each type of sensitive receptors. The risk values at other locations for each type of sensitive receptors would be lower than those shown in **Table 4.3-10**. Health risks at nearby worker/residential/sensitive receptors would all be below the significance thresholds. The health risks from project construction would be less than significant with the implementation of **AQ-1**.

TABLE 4.3-10 CONSTRUCTION – MODELED SENSITIVE RECEPTOR MAXIMUM HEALTH RISK

Receptor Type	Cancer Risk Impact (in one million)	Chronic Non-Cancer Hazard Index (HI) (unitless)	Acute Non-Cancer Hazard Index (HI) (unitless)	PM2.5 Concentration ($\mu g/m^3$)
Residential-MEIR[1]	0.80	0.00051	N/A	0.16
Daycare-MEDR[2]	0.40	0.00026	N/A	0.05
School-MESR [3]	0.24	0.00016	N/A	0.03
Recreational-MERR[4]	0.10	0.00006	N/A	0.01
BAAQMD Threshold	10	1	1	0.3

Notes:
[1] Maximally Exposed Individual Resident (MEIR). It is located about 140 feet north of the project boundary (just across the street of the project).
[2] Maximally Exposed Daycare Receptor (MEDR). It is the Lucciola Academy located approximately 350 feet north of the project boundary.
[3] Maximally Exposed School Receptor (MESR). It is the Mabel Mattos Elementary School, located approximately 920 feet southwest of the Project boundary.
[4] Maximally Exposed Recreational Receptor (MERR). It is the Augustus Rathbone Park. Located approximately 850 feet southeast of the project boundary.
Source: DayZenLLC 2021a, DayZenLLC 2022q, independent staff analysis.

Operation HRA

Less Than Significant Impact. Project operation emissions are a result of diesel fuel combustion from the gensets, off-site vehicle trips for worker commutes and material deliveries, and facility upkeep, such as architectural coatings, consumer product use, landscaping, water use, waste generation, and electricity use. They are categorized into two major sources: (1) stationary sources and (2) miscellaneous operation emissions (DayZenLLC 2021a, pg. 88).

(1) Stationary Sources: SVYBGF's 39 diesel gensets. Each of the 36 gensets for the data center suites would be powered by Caterpillar Model 3516E engines equipped with SCR equipment and DPFs to comply with Tier 4 emissions standards. The 3 additional house generators would be powered by Caterpillar Model C32 engines also equipped with SCR equipment and DPFs to comply with Tier 4 emissions standards. All gensets would be tested routinely to ensure they would function during an emergency. TAC emissions, represented as diesel particulate matter (DPM), resulting from diesel stationary combustion were assumed equal to PM10 emissions (DayZenLLC 2021a, pg. 88).

CARB's ATCM limits each engine to no more than 50 hours annually for reliability purposes (i.e., testing and maintenance). The applicant's health impacts are based on an annual maximum operating limit of 50 hours per year averaged over all engines for readiness testing and maintenance operations (DayZenLLC 2022q, pg. 2).

(2) Miscellaneous Operational Emissions: Miscellaneous emissions from operational activities such as worker travel, deliveries, energy and fuel use for facility electrical, heating and cooling needs, periodic use of architectural coatings, landscaping, etc. were evaluated by CalEEMod (DayZenLLC 2021a, pg. 92). However, these emissions were not included in the operation HRA. The health impacts are based on an annual maximum operating limit of 50 hours for readiness testing and maintenance operations.

Table 4.3-11 shows that the cancer risks, chronic HIs, acute HIs, and PM2.5 concentrations at the MEIR, MEDR, MESR, and MERR during the project's operation would be less than the BAAQMD's significance thresholds. Therefore, staff concluded that the health risks of the project operation would be a less-than-significant impact.

It should be noted that the risk values shown in **Table 4.3-11** are the highest of those modeled for each type of sensitive receptors. The risk values at other locations for each type of sensitive receptors would be lower than those shown in **Table 4.3-11**. Health risks at nearby sensitive receptors would all be below the significance thresholds. The health risks from the project's operation would be less than significant, and no mitigation would be necessary.

In conclusion, staff finds the health risks at sensitive receptor locations would be less than the BAAQMD CEQA Guidelines significance thresholds shown in **Table 4.3-1**. Staff concludes that the health risks from the project's construction and routine operation would be less than significant and would be further reduced with the implementation of **AQ-1**.

TABLE 4.3-11 OPERATION – MODELED SENSITIVE RECEPTOR MAXIMUM HEALTH RISK				
Receptor Type	**Cancer Risk Impact (in one million)**	**Chronic Non-Cancer Hazard Index (HI) [6] (unitless)**	**Acute Non-Cancer Hazard Index (HI) (unitless)**	**PM2.5 Concentration (µg/m³)**
Residential-MEIR[1]	0.66	0.00022	N/A	0.0042
Daycare-MEDR[2]	0.48	0.00016	N/A	0.0028
School-MESR[3]	0.41	0.00014	N/A	0.0016
Recreational-MERR[4]	0.21	0.00007	N/A	0.0009
BAAQMD Threshold	10	1	1	0.3

Notes:
[1] Maximally Exposed Individual Resident (MEIR). It is located about 140 feet north of the project boundary (just across the street of the project).
[2] Maximally Exposed Daycare Receptor (MEDR). It is the Lucciola Academy located approximately 350 feet north of the project boundary.
[3] Maximally Exposed School Receptor (MESR). It is the Mabel Mattos Elementary School, located approximately 920 feet southwest of the Project boundary.
[4] Maximally Exposed Recreational Receptor (MERR). It is the Augustus Rathbone Park. Located approximately 850 feet southeast of the project boundary.
Source: DayZenLLC 2021a, DayZenLLC 2022q, independent staff analysis.

Overlap of SVY06 Construction with SVY05 Operation HRA

Less Than Significant Impact. Readiness and maintenance testing of 17 engines constructed during Phase I would occur concurrently with Phase II construction activity resulting in a 16.5 month overlap period. During the overlap period sensitive receptors would be exposed to generator and construction equipment exhaust emissions as well as fugitive emissions from construction activity.

Construction equipment exhaust emissions were modeled as 20 point sources placed at regular 25-meter intervals around the Phase II construction area (DayZenLLC 2021a, pg. 110). Construction exhaust emissions were calculated using Phase II construction equipment input parameters in CalEEMod. Construction fugitive dust emissions were modeled as an area source encompassing the Phase II construction area with an effective plume height of two (2) meters.

Readiness and maintenance testing of the 16 2-MW data center generators and 1 1-MW house generator engines was annualized over the 16.5 month overlap period, assuming 50 hours of operation per year for each engine.

Table 4.3-12 shows that the cancer risks, chronic HIs, acute HIs, and PM2.5 concentrations at the MEIR, MEDR, MESR, and MERR during the overlap period would be less than the BAAQMD's significance thresholds. Therefore, staff concluded that the health risks of the project operation would be a less-than-significant impact.

It should be noted that the risk values shown in **Table 4.3-12** are the highest of those modeled for each type of sensitive receptors. The risk values at other locations for each type of sensitive receptors would be lower than those shown in **Table 4.3-12**. Health risks at nearby sensitive receptors would all be below the significance thresholds. The

health risks from the project's operation would be less than significant, and no mitigation would be necessary. The health risks from the project's construction would be less than significant with the implementation of **AQ-1**.

In conclusion, staff finds the health risks at sensitive receptor locations would be less than the BAAQMD CEQA Guidelines significance thresholds shown in **Table 4.3-1**. Staff concludes that the health risks from the project's construction and routine operation would be less than significant and would be further reduced with the implementation of **AQ-1**.

TABLE 4.3-12 OVERLAP PERIOD – MODELED SENSITIVE RECEPTOR MAXIMUM HEALTH RISK

Receptor Type	Cancer Risk Impact (in one million)	Chronic Non-Cancer Hazard Index (HI) (unitless)	Acute Non-Cancer Hazard Index (HI) (unitless)	PM2.5 Concentration ($\mu g/m^3$)
Residential-MEIR[1]	0.66	0.00022	N/A	0.024
Daycare-MEDR[2]	0.48	0.00016	N/A	0.01
School-MESR [3]	0.41	0.00014	N/A	0.011
Recreational-MERR[4]	0.21	0.00007	N/A	0.0029
BAAQMD Threshold	10	1	1	0.3

Notes:
[1] Maximally Exposed Individual Resident (MEIR). It is located about 140 feet north of the project boundary (just across the street of the project).
[2] Maximally Exposed Daycare Receptor (MEDR). It is the Lucciola Academy located approximately 350 feet north of the project boundary.
[3] Maximally Exposed School Receptor (MESR). It is the Mabel Mattos Elementary School, located approximately 920 feet southwest of the Project boundary.
[4] Maximally Exposed Recreational Receptor (MERR). It is the Augustus Rathbone Park. Located approximately 850 feet southeast of the project boundary.
Source: DayZenLLC 2021a, DayZenLLC 2022q, independent staff analysis.

Cumulative HRA

Less Than Significant Impact. This discussion addresses the impacts from cumulative sources in comparison to the BAAQMD significance thresholds for risk and hazards from cumulative sources (BAAQMD 2017b). The cumulative HRA is an assessment of the project's impact summed with the impacts of existing sources within 1,000 feet of the project. The results of this cumulative HRA are compared to the BAAQMD CEQA cumulative thresholds of: no more than 100 cancer cases per million; a chronic HI of no more than 10.0; and PM2.5 concentrations of no more than 0.8 $\mu g/m^3$ annual average PM2.5 concentrations. The BAAQMD CEQA Guidelines for assessing cumulative health risk impacts recommend investigating all sources of TACs within 1,000 feet of a proposed project (BAAQMD 2017b).

The applicant's cumulative HRA identified the maximum health impacts from each stationary source within 1,000 feet of the project (DayZenLLC 2021a, pg. 116). The applicant's cumulative HRA shows that the maximum cumulative cancer risk would be 38.6 in a million, lower than the threshold of 100 in a million; the maximum cumulative

HI would be 0.272, below the threshold of 10; and the maximum cumulative PM2.5 concentration would be 0.096 µg/m^3, lower than the threshold of 0.8 µg/m^3

Staff conducted an independent cumulative HRA, assessing the proposed project's impact summed with the impacts of existing sources within 1,000 feet[5] of the maximally exposed sensitive receptors, including the MEIR, MEDR, MESR, and the MERR. The results of staff's cumulative HRA are compared to the BAAQMD significance thresholds (BAAQMD 2017b) in **Table 4.3-13, Table 4.3-14**, and **Table 4.3-15**. Staff's cumulative HRA includes four major sources of impacts: (1) existing stationary sources; (2) surrounding highways, main streets, and railways; and (3) the project.

1. Existing Stationary Sources

The cumulative cancer risk, non-cancer HI, and PM2.5 concentrations of existing stationary sources were first retrieved from BAAQMD'S Permitted Sources Risk and Hazards Map[6]. Then the risks were modified using BAAQMD's Health Risk Calculator[7] to refine screening-level cancer risk, non-cancer health hazard index, and PM2.5 concentrations. The Health Risk Calculator incorporates factors such as risk associated with individual TACs emitted from an existing stationary source and how far a stationary source is from the project's maximally exposed sensitive receptor locations to calculate overall cancer risk, hazard index, and PM2.5 concentration from a stationary source.

Stationary sources contributing health risks and hazard impacts within a 1,000-foot radius of the project site were determined using BAAQMD's updated CEQA Tool Permitted Stationary Sources Risk and Hazards Map, a GIS map that provides the locations of stationary sources permitted by BAAQMD. Appropriate distance multipliers provided by the BAAQMD CEQA Tool Health Risk Calculator with Distance Multipliers were applied to represent adjusted risk and hazard impacts that can be expected with farther distances from the sources of emissions.

Staff searched the risk data for existing stationary sources within 1,000 feet of the MEIR, MEDR, MESR, and MERR.

2. Surrounding Highways, Main Streets, and Railways

Mobile impacts were determined using BAAQMD's raster tools, which provide impacts from major streets, highways, and railroads[8]. The tools developed by BAAQMD

5 Per the BAAQMD CEQA Guidelines, the zone of influence for the cumulative threshold is 1,000 feet from the source or receptor.

6 The BAAQMD'S Permitted Sources Risk and Hazards Map can be accessed here: https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65

7 The BAAQMD Health Risk Calculator Beta 4.0 can be downloaded here: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/tools/baaqmd-health-risk-calculator-beta-4-0-xlsx.xlsx?la=en

8 Raster tools provided by BAAQMD for the CA3 Backup Generating Facility EIR were used to quantify the health impacts from surrounding highways, streets, and railways (CEC 2022a).

incorporate risk assessment procedures from the 2015 OEHHA Air Toxics Hot Spots Program Guidance (CEC 2022a). The cancer risk and PM2.5 concentration from surrounding highways, major streets and railways were determined using BAAQMD raster files that incorporate annual average daily traffic (AADT) per EMFAC 2014 data for fleet mix and includes OEHHA's 2015 Guidance Methods. The raster files encompass highways, major streets, and rails with greater than 30,000 AADT. Staff received the raster files directly from BAAQMD, and then extracted the risk numbers by ArcGIS for the surrounding highways, main streets, and railways.

3. The Project

For the project, please see the result of the applicant's HRA for facility-wide operation of STACK presented in **Table 4.3-11**.

Table 4.3-13, Table 4.3-14, and **Table 4.3-15** summarize the results of the staff cumulative HRA and compares them to the BAAQMD significance thresholds for cumulative risk and hazards. The cumulative cancer risk, HI, and PM2.5 concentration were conservatively calculated using the maximum value in relation to the maximally exposed sensitive receptors as well as at the nearest residences. **Table 4.3-13, Table 4.3-14**, and **Table 4.3-15** show that none of the project's health risks would exceed the cumulative health risk thresholds when summed with the health risks of cumulative sources within 1,000 feet of each receptor.

In conclusion, staff finds that cumulative health risks at all sensitive receptor locations would be less than the BAAQMD CEQA Guidelines significance thresholds shown in **Table 4.3-1**. Staff concludes that the project's contribution to the cumulative impact of TAC emissions would be less than significant.

TABLE 4.3-13 SENSITIVE RECEPTOR CANCER RISK (PER MILLION) FROM CUMULATIVE SOURCES

Sources of Cumulative Impacts	Cancer Risk			
	MEIR[a]	MEDR[b]	MESR	Cancer Risk at MERR[d]
Existing Stationary Sources	0.84	0.81	0	0
Surrounding Highways, Major Streets, and Railways	17.67	17.72	14.15	15.61
STACK[e]	0.66	0.48	0.41	0.21
Total - Cumulative Sources	19.19	19.02	14.56	15.82
Significance Threshold	100	100	100	100
Potential Significant Impact?	No	No	No	No

Notes:
[a] Maximally Exposed Individual Resident (MEIR). The cumulative health risk impact of the proposed project was calculated including the stationary and mobile sources within 1,000 ft of this receptor. Staff used the data provided by BAAQMD.
[b] Maximally Exposed Daycare Receptor (MEDR). The cumulative health risk impact of the proposed project was calculated including the stationary and mobile sources within 1,000 ft of this receptor. Staff used the data provided by BAAQMD.

[c] Maximally Exposed School Receptor (MESR). The cumulative health risk impact of the proposed project was calculated including the stationary and mobile sources within 1,000 ft of this receptor. Staff used the data provided by BAAQMD.
[d] Maximally Exposed Recreational Receptor (MERR). The cumulative health risk impact of the proposed project was calculated including the stationary and mobile sources within 1,000 ft of this receptor. Staff used the data provided by BAAQMD.
[e] Load scenario: 100% load.
Sources: CEC staff analysis of data from BAAQMD.

TABLE 4.3-14 SENSITIVE RECEPTOR CHRONIC HAZARD INDICES FROM CUMULATIVE SOURCES

Sources of Cumulative Impacts	Chronic Hazard Index			
	MEIR[a]	**MEDR[b]**	**MESR[c]**	**MERR[d]**
Existing Stationary Sources	0.0092	0.0032	0.0015	0.0014
Surrounding Highways, Major Streets, and Railways	No Data Available[f]	No Data Available[f]	No Data Available[f]	No Data Available[f]
STACK[e]	0.0002	0.0002	0.0001	0.0001
Total - Cumulative Sources	0.0094	0.0034	0.0016	0.0015
Significance Threshold	10	10	10	10
Potential Significant Impact?	No	No	No	No

Notes:
[a] Maximally Exposed Individual Resident (MEIR). The cumulative health risk impact of the proposed project was calculated including the stationary and mobile sources within 1,000 ft of this receptor. Staff used the data provided by BAAQMD.
[b] Maximally Exposed Daycare Receptor (MEDR). The cumulative health risk impact of the proposed project was calculated including the stationary and mobile sources within 1,000 ft of this receptor. Staff used the data provided by BAAQMD.
[c] Maximally Exposed School Receptor (MESR). The cumulative health risk impact of the proposed project was calculated including the stationary and mobile sources within 1,000 ft of this receptor. Staff used the data provided by BAAQMD.
[d] Maximally Exposed Recreational Receptor (MERR). The cumulative health risk impact of the proposed project was calculated including the stationary and mobile sources within 1,000 ft of this receptor. Staff used the data provided by BAAQMD.
[e] Load scenario: 100% load.
[f] No data available — BAAQMD staff did not provide data for these sources.
Sources: CEC staff analysis of data from BAAQMD

TABLE 4.3-15 SENSITIVE RECEPTOR ANNUAL PARTICULATE MATTER (PM2.5) CONCENTRATIONS (µg/m³) ROM CUMULATIVE SOURCES

Sources of Cumulative Impacts	Annual DPM/PM2.5 Concentration			
	MEIR[a]	MEDR[b]	MESR[c]	MERR[d]
2 Existing Stationary Sources	0.0037	0.067	0	0.001
Surrounding Highways, Major Streets, and Railways	0.367	0.296	0.367	0.319
STACK[e]	0.012	0.003	0.003	0.003
Total - Cumulative Sources	0.383	0.366	0.370	0.323
Significance Threshold	0.8	0.8	0.8	0.8
Potential Significant Impact?	No	No	No	No

Notes:
[a] Maximally Exposed Individual Resident (MEIR). The cumulative health risk impact of the proposed project was calculated including the stationary and mobile sources within 1,000 ft of this receptor. Staff used data provided by BAAQMD.
[b] Maximally Exposed Daycare Receptor (MEDR). The cumulative health risk impact of the proposed project was calculated including the stationary and mobile sources within 1,000 ft of this receptor. Staff used the data provided by BAAQMD.
[c] Maximally Exposed School Receptor (MESR). The cumulative health risk impact of the proposed project was calculated including the stationary and mobile sources within 1,000 ft of this receptor. Staff used the data provided by BAAQMD.
[d] Maximally Exposed Recreational Receptor (MERR). The cumulative health risk impact of the proposed project was calculated including the stationary and mobile sources within 1,000 ft of this receptor. Staff used the data provided by BAAQMD.
[e] Load scenario: 100% load.
Sources: CEC staff analysis of data from BAAQMD.

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

This section considers impacts that may arise from emissions other than criteria air pollutants and TACs, such as emissions that may lead to odors.

BAAQMD states that, while offensive odors rarely cause direct health impacts or any physical harm, they still can be very unpleasant and lead to considerable distress among the public, often generating citizen complaints to local governments and BAAQMD (BAAQMD 2017b). Any project with the potential to frequently expose members of the public to objectionable odors would be deemed to have a significant impact. Odor impacts on residential areas and other sensitive receptors warrant the closest scrutiny, but consideration should also be given to other land uses where people may congregate, such as recreational facilities, worksites, and commercial areas.

BAAQMD CEQA Guidelines recommend a two-step process for determining the significance of potential odor impacts. First, determine whether the project would result in an odor source affecting receptors within the distances indicated in **Table 4.3-16**. Second, if the proposed project would result in an odor source and receptors within the screening level distances indicated in **Table 4.3-16**, a more detailed analysis should be conducted (BAAQMD 2017b).

TABLE 4.3-16 PROJECT SCREENING TRIGGER LEVELS FOR POTENTIAL ODOR SOURCES

Land Use/Type of Operation	Project Screening Distance
Wastewater Treatment Plant	2 miles
Wastewater Pumping Facilities	1 mile
Sanitary Landfill	2 miles
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	2 miles
Chemical Manufacturing	2 miles
Fiberglass Manufacturing	1 mile
Painting/Coating Operations	1 mile
Rendering Plant	2 miles
Coffee Roaster	1 mile
Food Processing Facility	1 mile
Confined Animal Facility/Feed Lot/Dairy	1 mile
Green Waste and Recycling Operations	1 mile
Metal Smelting Plants	2 miles

Source: BAAQMD 2017b, Table 3-3.

The project is not a type of operation that is classified as a typical odor source by BAAQMD, as shown in **Table 4.3-16**. The diesel engine generators would not be stationary sources of a type that are typically known to cause significant odor impacts.

Construction

Less Than Significant Impact. Minor odor sources during construction activities include diesel exhaust from heavy-duty equipment. Odors from construction activities near existing receptors would be temporary in nature and dissipate as a function of distance. Accordingly, the construction of the project is not expected to result in substantial emissions that may lead to odor impacts or impacts of emissions other than those of criteria pollutants and TACs identified elsewhere in this analysis.

Fugitive dust emissions can also create a nuisance that can cause adverse effects. The project is proposing to comply with the BAAQMD construction fugitive dust control BMPs and so should not have substantial fugitive dust emissions during construction that could adversely affect a substantial number of people.

Therefore, the construction of the project would not result in other emissions, such as those leading to odors, that could adversely affect a substantial number of people and would have less than significant impacts.

Operation

Less Than Significant Impact. Potential odor sources from the project's readiness testing and maintenance along with emergency operation would include diesel exhaust from genset readiness testing and maintenance, trash pick-up and other heavy-duty delivery

vehicles, and the occasional use of architectural coatings during routine maintenance. When compared to existing odor sources near the project site, which include heavy and light industrial uses, odor impacts from project readiness testing and maintenance along with emergency operations would be similar.

Once built and operating, the project would have no notable emissions other than those of criteria pollutants and TACs identified elsewhere in this analysis. Therefore, nuisance impacts would not be likely to occur during operation, including readiness testing and maintenance or emergency operation. During readiness testing and maintenance and during emergency operation, the project would not result in odors or other emissions that could adversely affect a substantial number of people and would have a less than significant impact related to odors. In conclusion, staff finds that the project would not likely create objectionable odors affecting a substantial number of people.

4.3.4 Mitigation Measures

AQ-1: To ensure that fugitive dust impacts are less than significant, the project will implement the Bay Area Air Quality Management District (BAAQMD) recommended Best Management Practices (BMPs) during the construction phase, the project owner shall implement a construction emissions control plan that has been reviewed and approved by the Director or Director's designee of the City of Santa Clara Planning Division prior to the issuance of any grading or building permits, whichever occurs earliest. These BMPs are incorporated into the design of the project and will include:

- Water all exposed areas (e.g. parking areas, graded areas, unpaved access roads) twice a day.
- Maintain a minimum soil moisture of 12% in exposed areas by maintaining proper watering frequency.
- Cover all haul trucks carrying sand, soil, or other loose material.
- Suspend excavation, grading, and/or demolition activities when average wind speed exceeds 20 miles per hour.
- Pave all roadways, driveways, and sidewalks as soon as possible. Lay building pads as soon as grading is completed, unless seeding or soil binders are used.
- Use a power vacuum to sweep and remove any mud or dirt-track next to public streets, if visible soil material is carried onto the streets.
- Limit vehicle speeds on unpaved roads to 15 miles per hour (mph).
- Minimize idling time for all engines by shutting engines when not in use or limiting idling time to a maximum of five minutes. Provide clear signage for construction workers at all access points.
- Properly tune and maintain construction equipment in accordance with manufacturer's specifications. Check all equipment against a certified visible emissions calculator.

- Post a publicly visible sign with the telephone number and name of the person to contact regarding dust complaints and the BAAQMD telephone number. The contact person shall implement corrective measures, as needed, within 48 hours, and the BAAQMD shall be informed of any legitimate complaints received to verify compliance with applicable regulations.
- Limit simultaneous occurrence of excavation, grading, and ground-disturbing construction activities.
- Minimize idling time of diesel-powered construction vehicles to two minutes.
- All contractors use equipment that meets CARB's most recent certification standard for off-road heavy-duty diesel engines.

4.3.5 References

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4.4 Biological Resources

This section describes the environmental setting and regulatory background and discusses impacts associated with the construction and operation of the project with respect to biological resources that occur in the project area.

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

Environmental checklist established by CEQA Guidelines, Appendix G.

4.4.1 Environmental Setting

The proposed project site is located within the city of San José in a fully developed/industrial area, and is currently paved with two existing buildings, referred to as the Olympus building (2400 Ringwood Avenue) and the Fortune Drive building (1849 Fortune Drive). The total project site encompasses 9.8 acres and an application to change the zoning from Industrial to Transit Employment Center (PD) Planned Development zoning district is in the process of being submitted to the city. Both the Olympus building and the Fortune Drive building would be demolished as part of the project. The immediate

area around the project site is a mix of residential, commercial, and industrial development. The streets closest to the project site are Trade Zone Boulevard to the north, Ringwood Avenue to the west and Fortune Drive to the south; the first streets providing access to the Olympus building and the last street provides access to the southern side of the Fortune Drive building. Interstate 880 is 0.72 mile to the west of the project site and the Norman Y. Mineta San José International Airport is just over 2.8 miles to the southwest of the project site.

The closest body of water, Coyote Creek, is just over a mile west from the proposed project site. Further to the west the Guadalupe River lies a total of 2.5 miles away from the project site. These tributaries flow northward, with the Guadalupe River flowing into both the Guadalupe and Alviso sloughs, and empty into San Francisco Bay approximately 5 miles northwest of the project site. Approximately 5.6 miles to the northeast of the proposed project site lies Calaveras Reservoir. The project site would use the existing sewer lines that are owned by the City of San José and wastewater would be treated by the San José/Santa Clara Regional Wastewater Treatment Plant. Most of the project components, such as the new substation, would be onsite, however, two 0.25 mile offsite transmission lines would also be constructed (and may entail replacement of up to three new power poles (transmission towers) for the above ground transmission line route) above and below ground, along the southern sidewalk and in the center respectively of Trade Zone Boulevard, which is also a fully developed area.

The habitat onsite is highly developed and has been previously landscaped. There are over 100 non-native and native trees within the proposed project site. Native tree species include Coast Live Oak (*Quercus agrifolia*), Coast Redwood (*Sequoia sempervirens*), Valley Oak (*Quercus lobata*), and White Alder (*Alnus rhombifolia*). All the trees within the project site would be removed, while an additional 54 trees along the proposed transmission line route on Trade Zone Boulevard and 26 trees adjacent to the project site would be potentially negatively impacted by construction activities. Special status animal species are not expected on the project site, but due to the close proximity of several important offsite wildlife preserves, parks, and known communities of certain species it is possible that special status species might occur onsite as foragers, transients and possible residents.

Bordering the San Francisco Bay, the most notable of these offsite wildlife preserves and parks are the Don Edwards National Wildlife Refuge and Baylands Park, which are respectively about 4 and 5 miles northwest of the project site. In addition, the project site is surrounded by Ed Levin County Park 4 miles to the northeast and Alum Rock Park and Sierra Vista Open Space Preserve approximately 4 miles to the southeast. These protected natural wildlife preserves and parks offer a variety of habitats that support hundreds of species, including federal and state threatened and endangered species. Examples of these habitats are salt marsh, wetlands, oak woodlands and grasslands. The San Francisco Bay alone is home to over 500 fish and wildlife species, 20 of whom are threatened or endangered species. During annual migrations, millions of bird species

could be transients and fly over San Francisco Bay and the surrounding area as they follow the Pacific Flyway migration path (U.S. EPA 2022).

Based on a California Natural Diversity Database (CNDDB) search, the California Energy Commission (CEC) staff identified special-status plant and wildlife species that may occur within a 9 quad search parameter from the project site. These include but are not limited to: tricolored blackbird (*Agelaius tricolor*), burrowing owl *(Athene cunicularia*), great blue heron (*Ardea herodias*), golden eagle (*Aquila chrysaetos*), white tailed kite (*Elanus leucurus*), western snowy plover (*Charadrius nivosus nivosus*), crotch bumble bee (*Bombus crotchii*), western bumble bee (*Bombus occidentalis*), California tiger salamander (*Ambystoma californiense* pop. 1), Western pond turtle (*Emys marmorata*), and saltmarsh harvest mouse (*Reithrodontomys raviventris*). The special status plants include, but are not limited to: Congdon's tarplant, Hoover's button celery, and lesser saltscale. More in-depth discussions of special-status species with potential to occur onsite and be affected by the project are included below under each California Environmental Quality Act impact criterion. Nitrogen deposition impacts may extend beyond a typical 9-quad topographic search; therefore, staff also conducted a broader 6-mile radius search for special status species and habitat. Critical habitat for the California red-legged frog occurs to the east within this search parameter.

Regulatory Background

Federal

Endangered Species Act (16 U.S.C., § 1530 et seq., and 50 C.F.R., part 17.1 et seq.). The Endangered Species Act (ESA) designates and provides for protection of threatened and endangered plant and animal species, and their critical habitat. Its purpose is to protect and recover imperiled species and the ecosystems for which they depend. It is administered by the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS). The USFWS is responsible for terrestrial and freshwater organisms while NMFS is responsible for marine wildlife such as whales and anadromous fish (such as salmon). Species may be listed as endangered or threatened. All species of plants and animals, except pest insects, are eligible for listing. Species are defined to include subspecies, varieties, and for vertebrates, distinct population segments. The ESA protects endangered and threatened species and their habitats by prohibiting the "take" of listed animals and the interstate or international trade in listed plants and animals, including their parts and products, except under federal permit. Take of federally listed species as defined in the ESA is prohibited without incidental take authorization, which may be obtained through Section 7 consultation (between federal agencies) or a Section 10 Habitat Conservation Plan.

The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c). This Act—enforced through regulations written by the USFWS—prohibits the "taking" of bald and golden eagles, including their parts, nests, or eggs. To take is defined as to "pursue,

shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest, or disturb" any bald or golden eagle, whether "alive or dead...unless authorized by permit."

Migratory Bird Treaty Act (16 U.S.C., §§ 703-711). The Migratory Bird Treaty Act (MBTA) makes it illegal to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid federal permit. The USFWS has authority and responsibility for enforcing the MBTA.

Clean Water Act Sections 401 and 404. The Clean Water Act (CWA) (33 U.S.C., §§ 1251–1376) requires the permitting and monitoring of all discharges to surface water bodies. Section 404 (33 U.S.C., § 1344) requires a permit from the United States Army Corps of Engineers (USACE) for a discharge from dredged or fill materials into a water of the United States, including wetlands. Section 401 (33 U.S.C., § 1341) requires a permit from the regional water quality control board for the discharge of pollutants. By federal law, every applicant for a federal permit or license for an activity that may result in a discharge into a California water body, including wetlands, must request state certification that the proposed activity will not violate state and federal water quality standards.

State

California Fish and Game Code Section 1600-1605. Fish and Game Code section 1600, *et seq*. does not specifically contain provisions regulating activities that would impact wetlands, isolated areas containing riparian vegetation, or wetland hydrology. The California Fish and Game Commission policy regarding wetlands resources, updated in August 2005, states that "it is the policy of the Fish and Game Commission to seek to provide for the protection, preservation, restoration, enhancement and expansion of wetland habitat in California" and to "strongly discourage development in or conversion of wetlands." As a result, although the Fish and Game Commission has no independent statutory permitting authority related to wetlands, the policy underscores that the Commission does not support wetland development proposals unless "project mitigation assures there will be 'no net loss' of either wetland habitat values or acreage" and "prefers mitigation which would achieve expansion of wetland acreage and enhancement of wetland habitat values." Section 2785(e) of the Fish and Game Code further states, "Riparian means lands which contain habitat which grows close to and which depends on soil moisture from a nearby freshwater source." The 1993 Executive order W-59-93 establishes the "no net loss" policy to also protect California's wetlands. The California Department of Fish and Wildlife (CDFW) implements this Executive Order.

California Endangered Species Act (Fish and G. Code, §§ 2050-2098). The California Endangered Species Act (CESA) of 1984 states that all native species of fish, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threated or endangered designation, will be protected and preserved. CESA prohibits the take of any species of wildlife designated by the California

Fish and Game Commission as endangered, threatened, or candidate species. The CDFW may authorize the take of any such species if certain conditions are met. These criteria are listed in Title 14 of the California Code of Regulations, section 783.4 subdivisions (a) and (b). For purposes of CESA "take" means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill these species (Fish and G. Code, § 86).

California Fish and Game Code Section 3503. This section makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.

California Fish and Game Code Section 3503.5. This section makes it unlawful to take, possess, or destroy any birds in the orders Falconiformes and Strigiformes or to take, possess, or destroy the nest or eggs of any such bird.

California Fish and Game Code Section 3513. This section protects California's migratory birds by making it unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame birds.

California Fish and Game Code Section 3800. All birds occurring naturally in California that are not resident game birds, migratory game birds, or fully protected birds are nongame birds. It is unlawful to take any nongame bird except as provided in this code or in accordance with regulations of the commission or, when relating to mining operations, a mitigation plan approved by the department.

California Fish and Game Code Sections 3511, 4700, 5050, and 5515. These sections designate certain species as fully protected and prohibit the take of such species or their habitat unless for scientific purposes (see also Cal. Code Regs., tit. 14, § 670.7). Incidental take of fully protected species may also be authorized in a Natural Community Conservation Plan (NCCP) (Fish and G. Code, § 2835).

The CDFW is the administering agency for the Fish and Game Code sections discussed above.

Porter-Cologne Water Quality Control Act. The State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs) have jurisdiction over all surface water and groundwater in California, including wetlands, headwaters, and riparian areas. The SWRCB or applicable RWQCB must issue waste discharge requirements for any activity that discharges waste that could affect the quality of waters of the state.

Local

The Santa Clara Valley Habitat Plan (SCVHP). This 2012 habitat plan primarily covers southern Santa Clara County, as well as the City of San José (except for the bayland areas). The SCVHP addresses listed species and species that are likely to become listed during the plan's 50-year permit term. The covered species include nine plants and

nine animals. The SCVHP requires that the agencies comment on reportable interim projects and recommend mitigation measures or project alternatives that would help achieve the preliminary conservation objectives and not preclude important conservation planning options or connectivity between areas of high habitat value.

The project is considered a covered project under the SCVHP. As a result, the project would be subject to conditions and fees of the SCVHP, which would be calculated at the time the project submits an application, which corresponds to timing of submission of grading and/or building permit applications. Because the project is in a developed site, no land cover fees are due. However, a nitrogen deposition fee is expected to be assessed for the proposed project pursuant to applicable provisions of the SCVHP for vehicle miles traveled (non-point source emissions) and mitigation for point-source emissions (the project' backup generators).

Envision San José 2040 General Plan **(General Plan).** The General Plan aims to protect biological resources when properties are developed in San José. Generally, similar types of requirements occur in the General Plan as in the SCVHP. The General Plan includes several policies with respect to biological protections that are relevant to this analysis including, but not limited to, the following (San José 2022):

- MS-10.4: Encourage effective regulation of mobile and stationary sources of air pollution, both inside and outside of San José. In particular, support Federal and State regulations to improve automobile emission controls.
- Policy MS-21.4: Encourage the maintenance of mature trees, especially natives, on public and private property as an integral part of the community forest. Prior to allowing the removal of any mature tree, pursue all reasonable measures to preserve it.
- Policy MS-21.5: As part of the development review process, preserve protected trees (as defined by the Municipal Code), and other significant trees. Avoid any adverse effect on the health and longevity of protected or other significant trees through appropriate design measures and construction practices. Special priority should be given to the preservation of native oaks and native sycamores. When tree preservation is not feasible, include appropriate tree replacement, both in number and spread of canopy.
- Policy MS-21.6: As a condition of new development, require the planting and maintenance of both street trees and trees on private property to achieve a level of tree coverage in compliance with and that implements City laws, policies or guidelines.
- Policy MS-21.8: For Capital Improvement Plan or other public development projects, or through the entitlement process for private development projects, require landscaping including the selection and planting of new trees to achieve the following goals:
    - Avoid conflicts with nearby power lines.
    - Avoid potential conflicts between tree roots and developed areas.

  - Avoid use of invasive, non-native trees.
  - Remove existing invasive, non-native trees.
  - Incorporate native trees into urban plantings in order to provide food and cover for native wildlife species.
  - Plant native oak trees and native sycamores on sites which have adequately sized landscape areas and which historically supported these species.
- Policy MS-21.18: Implement the Heritage Tree Ordinance to maintain and protect San José's heritage trees.
- Policy ER-1.4: Minimize the removal of ecologically valuable vegetation such as serpentine and non-serpentine grassland, oak woodland, chaparral, and coastal scrub during development and grading for projects within the City.
- Policy ER-1.5: Preserve and protect oak woodlands, and individual oak trees. Any loss of oak woodland and/or native oak trees must be fully mitigated.
- Policy ER-1.6: Preserve, protect, and manage serpentine grasslands and serpentine chaparral, particularly those supporting sensitive serpentine bunchgrass communities providing habitat for sensitive plant and animal species. Development will not be permitted on serpentine grasslands or chaparral supporting state or federal candidate or listed threatened or endangered plant or animal species. Appropriately managed grazing is encouraged on serpentine grasslands.
- Policy ER-4.1: Preserve and restore, to the greatest extent feasible, habitat areas that support special status species. Avoid development in such habitats unless no feasible alternatives exist, and mitigation is provided of equivalent value.
- Policy ER-4.3: Prohibit planting of invasive non-native plant species in natural habitats that support special-status species.
- Policy ER-4.4: Require that development projects incorporate mitigation measures to avoid and minimize impacts to individuals of special-status species.
- Policy ER-5.1: Avoid implementing activities that result in the loss of active native birds' nests, including both direct loss and indirect loss through abandonment, of native birds. Avoidance of activities that could result in impacts to nests during the breeding season or maintenance of buffers between such activities and active nests would avoid such impacts.
- Policy ER-5.2: Require that development projects incorporate measures to avoid impacts to nesting migratory birds.
- Policy ER-6.5: Prohibit use of invasive species, citywide, in required landscaping as part of the discretionary review of proposed development.
- Policy ER-6.8: Design and construct development to avoid changes in drainage patterns across adjacent natural areas and for adjacent native trees, such as oaks.

City of San José Municipal Code. The City of San José has a Tree Ordinance (Chapter 13.32 of the Municipal Code), which regulates the removal of trees. An "ordinance-size tree" is defined as any native or non-native tree species with a circumference of 38 inches (diameter of 12 inches) at 54 inches above the natural grade of slope. A tree removal permit is required from the City prior to the removal of any trees covered under the ordinance. Prior to the issuance of a tree removal permit, the City requires that a formal tree survey be conducted, which indicates the number, species, trunk circumference, and location of all trees that will be removed or impacted by the project.

4.4.2 Environmental Impacts

a. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Construction

Less Than Significant with Mitigation Incorporated. Special-status plant and animal species may be present in the study area and are protected by existing federal, state, and local laws, policies, and regulations as previously described above. While the applicant did not provide any results of a species search, the CEC staff performed an independent analysis which included conducting a standard 9 Quad CNDDB search and seeking feedback on the application from experts at US Fish and Wildlife Service, and California Department of Fish and Wildlife. Staff has selected the following species to discuss below based on recent occurrences recorded in CNDDB of each species as well as each species' presence within the quad containing the project and/or each species' known occurrence within a two-mile radius of the project's immediate location.

Wildlife and Plant Species

Staff evaluated a nine-quad CNDDB search and refined the list of over 80 potential special-status species known to occur in the vicinity of the project site down to only two special-status species staff considers having low-potential to occur within the project site: golden eagle and burrowing owl. For golden eagle, staff notes that as a Fully Protected species under CDFG code, this means zero take is allowed (i.e. low potential is potential for illegal take). Burrowing owl, a species of special concern pursuant to CDFG code, may also occur. Staff considered the possibility of the rest of the special-status species briefly discussed below but considers it highly unlikely for these species to be found at all on the site for the reasons mentioned in the analysis, with the exception of burrowing owl (also discussed further below).

The white-tailed kite (*Elanus leucurus*), a fully protected raptor species, is known to occur in the area surrounding the project site. White-tailed kites frequent grasslands, woodlands and especially cultivated fields, but will stay away usually from developed

areas (CLO 2022). The most recent CNDDB record of the white-tailed kite is from 2004, but the Santa Clara Valley Audubon Society (SCVAS) lists sighting them in the last three years while also noting that they are commonly spotted within nesting bird season. Even though they nest in trees, it is not expected that they will show up within the project area due to the urbanized condition of the site.

The yellow rail (*Coturnicops noveboracensis*), California black rail (*Laterallus jamaicensis coturniculus*), and tricolored blackbird (*Agelaius tricolor*) are listed birds that live within marshland, wet meadows, and the latter in wetland habitat. The yellow rail is a California species of special concern. Historical records indicate its presence in the City of San José and the SCVAS lists sighting them within the past several years. The California black rail, a state-listed threatened and fully protected species, was documented on CNDDB as having occurred in the area as recently as 2016. For the last three years SCVAS has recorded sightings, specifying on the website that these are rare occurrences and do not happen every year. The most recent record of tricolored blackbird, a state-listed threatened bird, in the CNDDB in the project area was for 2015 and again the SCVAS has sighted this species in the last several years. However, none of these species are expected to occur on the project site due to its urbanized condition and lack of surface waters, so no impacts are anticipated.

Although there are both historic and, for some, more recent records of the following species occurring within this area of San José, these special-status animal species are not expected to be present or occur onsite: great blue heron (*Ardea herodias*), western snowy plover (*Charadrius nivosus nivosus*), crotch bumble bee (*Bombus crotchii*), western bumble bee (*Bombus occidentalis*), California tiger salamander (*Ambystoma californiense* pop. 1), Western pond turtle (*Emys marmorata*), and saltmarsh harvest mouse (*Reithrodontomys raviventris*). This is due to the fully developed character of the project site, lack of supportive habitat within the project site, and the urbanized nature of the immediate surrounding area.

Just like the special-status animal species listed above, these special-status plant species are also not expected to be present or occur onsite: Congdon's tarplant (*Centromadia parryi ssp. congdonii*), Contra Costa goldfields (*Lasthenia conjugens*), Hoover's button celery (*Eryngium aristulatum var. hooveri*), and lesser saltscale (*Atriplex minuscula).* All these plants are ranked 1B.1, meaning that they are rare in California and elsewhere, more specifically being very threatened within California due to over 80 percent of existing occurrences facing immediate risk. Contra Costa goldfields is also listed as federally endangered. While all these plant species are known to occur in the project area, the developed nature of the site and lack of suitable habitat (the main habitat for Contra Costa goldfields and Hoover's button celery are vernal pools) they would not be expected to grow or exist onsite.

While most special-status species in the area are not expected to occur onsite, and burrowing owl and golden eagle have low potential to occur, the project site is near several natural wildlife preserves and parks as mentioned previously in the

"Environmental Setting" subsection above. As the project is so close to important wildlife preserves, like Don Edwards National Wildlife Refuge, and just around 5 miles southeast of San Francisco Bay, flyover and transient special status bird species are possible, especially during annual migrations and nesting bird season. Thus, since it is possible for special status species and nesting birds to occur onsite, it is important that a worker environmental awareness program (WEAP) is developed, and onsite construction personnel are trained to recognize and avoid biological resources. The WEAP will help protect and prevent harm to biological species during construction and ensure that impacts to all biological resources are less than significant. Therefore, staff proposes mitigation measure **BIO-1** to develop and implement a WEAP.

Special Status Species – Burrowing Owl

Western burrowing owls (*Athene cunicularia*), a California species of special concern, are known to occur within a two-mile radius of the proposed project site. Their presence has been consistent in the last decade, and they have recently been spotted the last several years as recorded in the SCVAS annual bird list count. The project site is within the study area and conservation zone for burrowing owl identified in the Santa Clara Valley Habitat Plan, Figure 5-11. Furthermore, the project site is located less than 3 miles to the south and northeast respectively of two known burrowing owl breeding sites at San José-Santa Clara Regional Wastewater Facility Bufferlands and San José International Airport. A recent study showed that while tagged burrowing owl have been known to travel up to 7.5 miles between breeding sites, most owls will stay within a 1-to-4-mile distance between a breeding and over-wintering site (CDFW 2018). In addition, there are multiple known burrowing owl over-wintering sites nearby, the closest occurring less than a mile south-east of the project site according to the SCVHP Figure 5-11.

Further, in staff's experience with CEC-licensed projects, Alamitos Energy Center (13-AFC-01) and Huntington Beach Energy Project (12-AFC-02C), burrowing owl may move onsite during construction to inhabit the most meager of habitat available, such as a pipe culvert. Aside from the examples cited, various literature concurs that when there is a lack of burrows abandoned by other animals they sometimes will burrow in human-made structures like water drainage ducts, PVC pipe, or other opportunistic places that provide a den-like coverage (CLO 2022).

Although the project site lacks the natural habitat, grasslands, and ruderal habitat with abandoned ground squirrel burrows that burrowing owls prefer, staff has taken all the facts mentioned above into account and considers there to be a low potential for burrowing owl to occur onsite. If burrowing owls occurred onsite and the correct procedures were not adhered to, a significant impact to this species might occur. Therefore, staff referenced similar mitigation from the SCVHP condition 15 for burrowing owl, and the CDFW's *Staff Report on Burrowing Owl Mitigation* (2012) to recommend these several mitigation measures presented in **BIO-2 Parts A** – **C**, to prevent and reduce impacts to burrowing owls to less than significant levels. Pre-construction surveys, pursuant to **Part A** would reduce the impacts to burrowing owl during the construction

phase. **Part B and Part C** protect and lessen impacts to burrowing owl by describing the process of establishing buffer zones during the breeding and non-breeding season, monitoring, discouraging re-colonization, and passive relocation. The implementation of **BIO-2** would ensure that any impacts to burrowing owl are avoided and reduced to a less than significant impact.

Staff also analyzed whether the project applicant would need to pay a "burrowing owl fee" since the project is covered under the SCVHP (2012) and this fee is sometimes applicable to development projects that are exempt from land cover fees. Chapter 9 of the SCVHP defines that if a covered activity "occurs in occupied burrowing owl nesting habitat as defined in Figure 5-11, a burrowing owl fee will be paid by the project applicant" (SCVHP 2012, page 9-33). By referencing Figure 5-11, staff was able to confirm that the project area is not located in an occupied burrowing owl nesting habitat, and therefore the project applicant would not need to pay a burrowing owl fee.

Special Status Species – Golden Eagle

Golden eagles (*Aquila chrysaetos),* one of the largest raptors in the world, are designated fully protected and are known to occur in the area surrounding the project site. While golden eagles are known to prefer mountain ranges up to 12,000 feet and cliffs to nest in, they have adapted to nest within human-made structures such as windmills, observation towers and electrical transmission towers. They are commonly found in the area with a recent CNDDB record from 2021 and have been observed by SCVAS bird watchers for the past 3 years. While they may have limited foraging opportunities within the project site, these raptors eat a wide variety of smaller mammals including common tree squirrels, nesting birds and the contents of the nests, or dead carrion, all of which might occur onsite (CLO 2022). Considering this along with the fact that they are not deterred from nesting in developed areas, and particularly in electrical transmission towers or any structure that is high off the ground, there is low potential for them to occur within the project area.

One of the two 0.25-mile long transmission line extensions required to serve the project would be a single circuit 115 kilovolt (kV) overhead transmission line (T-Line), to be designed and built by PG&E. Between four to six poles may need to be replaced with new tubular steel poles between 70 and 130 feet in height. Golden eagles have the potential to be attracted to these towers or even attempt nesting. A significant impact to golden eagles might occur if one were electrocuted. Electrocution of golden eagles can occur where there is phase-to-phase contact or with exposed energized or grounded parts. Staff determined the potential for impacts to golden eagles would primarily be based on the design of the proposed 115 kV line and tower and the spacing between energized parts. As part of its independent research, staff reviewed PG&E technical references that describe the spacing and standard features of 115 kV towers to determine the expected spacing for 115 kV class towers (PG&E 2004, Figure 2-5). Golden eagles typically have a wingspan 72-90 inches (6-7.5 feet) and height of 18-26 inches (1.5-2.2 feet) (APLIC 2006). Staff's research indicates a typical pole design for a 115 kV T-line, the vertical

distance between phases is 8.6 feet minimum and the horizontal distance between two circuits or two phases is 12 feet (PG&E 2004, Figure 2-5). Because there would be sufficient distance, according to PG&E typical 115 kV pole design, impacts to golden eagles would be less than significant.

Special-Status Species – Nesting Birds

Less Than Significant with Mitigation Incorporated. If construction occurs during the nesting bird season from February to August, it is possible for construction activities to affect nesting and migratory birds that are attracted to the urban vegetated areas on and near the project site. This includes the 156 trees onsite that would be removed during construction and the trees adjacent to any construction areas. Many avian species nest within trees, while some species are known to nest on the ground and other opportune places. Construction activity near nesting birds is disruptive and sometimes can cause nest abandonment and thus mortality of hatched chicks and eggs. Destruction of active bird nests, nest abandonment, or loss of reproductive effort caused by disturbance are considered "take" by the CDFW, and therefore would be a significant impact.

Staff evaluated the applicant's proposed measures to avoid and reduce impacts to nesting birds and considers the measures not sufficient as the measures lack the level of detail and scope necessary to ensure potential project impacts on birds protected by the Migratory Bird Treaty Act (MBTA) and Fish and Game codes. Although the measures discuss the need for pre-construction surveys of nesting birds during the nesting bird season, staff does not agree with certain aspects of the measure. The applicant's proposed timing for pre-construction surveys is based on an arbitrary definition of an early and late nesting bird season. The applicant proposes nesting bird surveys 14 days before construction during the months of February through April (early season), and 30 days before construction starts during the months of May through August (late season). As far as staff is aware, there is no definition of an early and late nesting bird season widely accepted by wildlife agencies and experts in the field. Furthermore, most nests are built within a period of two days to two weeks and timing differs between species. The length of time involved in building a nest is unaffected by whether it is near the beginning months or later months of the nesting bird season. Therefore, staff proposes that if construction occurs anytime within the nesting bird season, the timing of the surveys should remain consistent and be defined as a set period of days before construction begins. In addition, the time period the applicant proposes between the pre-construction bird survey and the beginning of construction allows too much time to lapse, based on how long it takes most species to build a nest, to prevent nests from being established. It is customary for this reason for more than one pre-construction survey to be done during the nesting bird season. Thus, staff is also recommending that the time period be adjusted, and a second survey is performed closer to the start of construction to reduce the chances of nests being built. Also, the survey protocol does not directly address the need for repeat surveys in the event construction activities stops for an extended period. While the applicant proposes measures that would make sure that buffers are established if nests are found, they do not specify how these nests would be

protected or include any protective measures in the event nesting birds covered by the MBTA and Fish and Game codes were to establish on the site during construction. Lastly, the details of what should be included in the report are not outlined in the measures.

To ensure impacts to nesting birds are avoided and minimized to less than significant, staff proposes **BIO-3**, which would provide details on survey protocols and best site practices necessary to ensure potential project impacts on birds protected by the Migratory Bird Treaty Act (MBTA) and Fish and Game codes are reduced to a less than significant level.

As briefly discussed for the golden eagle above, as the applicant did not include detailed reporting requirements in their proposed measure, staff proposes **BIO-4.** This mitigation measure would establish the Avian Protection Plan that would consist of a compilation of the nest survey report(s) and avian best practices outlined in **BIO-2** and **BIO-3** in addition to a summary of the avian protection design measures to reduce the chances of avian electrocution previously discussed above. The main purpose of **BIO-4** would be to clarify the degree of detail in the nest survey report(s), which more closely aligns to accepted best practices for preparing avian survey reports, and the establishment of the Avian Protection Plan.

Operation

Less Than Significant with Mitigation Incorporated. The proposed project is considered a "covered project" under the SCVHP. The Santa Clara Valley Habitat Agency (SCVHA) leads the implementation of the SCVHP, although fees for this project are paid to the City of San José. The SCVHP defines measures to avoid, minimize, and mitigate impacts on covered species and their habitats. These measures are described as conditions on covered activities designed to achieve the following objectives:

- Provide avoidance of covered species during implementation of covered activities throughout the study area.
- Prevent take of individuals from covered activities as prohibited by law.
- Minimize adverse effects on natural communities and covered species where conservation actions will take place.
- Avoid and minimize impacts on jurisdictional wetlands and waters throughout the study area.

Non-Point Source Nitrogen Emission and Deposition

To be consistent with the SCVHP, the applicant is required to pay a nitrogen deposition fee, in-lieu of providing compensatory mitigation, for projects that result in atmospheric nitrogen emissions. Nitrogen deposition is the input of nitrogen oxide (NOx) and ammonia (NH3) "atmospherically derived pollutants" primarily nitric acid (HNO3), from the atmosphere to the biosphere. Nitrogen deposition sources are primarily vehicle, agriculture, and industrial emissions (including power plants). Vehicles are considered a

"non-point" source because they are mobile. The fee is determined by the number of new vehicle trips for the proposed project. However, this nitrogen deposition fee is only assessed on mobile emission sources because it was not feasible to calculate impacts from point source emissions at the time the SCVHP was being prepared (SCVHP 2012). The project's backup generators would also contribute (as a point source of emissions) to nitrogen deposition; therefore, staff also analyzed nitrogen deposition from the testing and maintenance of the backup generators to potential sensitive habitats.

The proposed project would generate a maximum of 205 daily vehicle trips during operations over existing site conditions (DayZen LLC 2022w). For new daily vehicle trips, the nitrogen deposition fee is calculated by taking the number of new daily vehicle trips and multiplying it by the nitrogen deposition fee of $5.85 (currently) (SCVHA 2022). For permanent impacts the daily vehicle trips (205) multiplied by $5.85 results in a nitrogen deposition fee of $1,199.25. Staff proposes **BIO-5**, requiring the one-time payment of a nitrogen deposition fee, which would reduce impacts from non-point sources to below the level of significance (exact fees to be updated annually by the Santa Clara Valley Habitat Agency and paid by the project owner).

Point Source Nitrogen Emission and Deposition

As mentioned previously, testing and maintenance of the backup generators would also result in NOx emissions and are considered a "point" source due to the stationary disposition. Long-term, continuous NOx emissions that contribute to nitrogen deposition can affect special status plant species thus also affecting the special status animal species that rely on these plants for food or shelter.

Mechanisms by which nitrogen deposition can lead to impacts on sensitive species include changes in species composition among native plants and the enhancement of invasive species such as grasses (Fenn et al. 2003, Weiss 2006, and CEC 2006). The increased dominance and growth of invasive annual non-native species is especially prevalent in low biomass vegetation communities that are naturally nitrogen-limited (e.g., serpentine soils). Nitrogen deposition artificially fertilizes the soil and creates better conditions for non-native species to persist and to ultimately displace native species, resulting in type conversion (conversion of one habitat type to another). Increased nitrogen deposition in nitrogen poor soils has allowed for the proliferation of non-native species that can crowd out native species. For this project, as an example, species potentially affected could be most beautiful jewelflower (*Streptanthus albidus ssp. peramoenus*).

The applicant declined to perform an analysis of the potential nitrogen deposition related to the project's generators (DayZenLLC 2022k) as requested by staff. Because staff requires background existing nitrogen deposition as well as project-specific nitrogen deposition isopleths, the CEC Biological Resources staff, in cooperation with the CEC Air Quality staff, have undertaken an independent quantitative analysis, as described further below. This analysis covers a six-mile project radius, as this is the typical deposition zone for NOx with defensible modeling results, in staff's experience. Please also refer to

Appendix C for additional information regarding these calculations and the underlying methodology.

To approach quantifying nitrogen deposition, staff uses "critical load." Critical load is defined as the input of a pollutant below which no detrimental ecological effects have been documented to occur over long-term studies. NOx-sensitive habitats occur within six miles of the project site: California red-legged frog critical habitat and serpentine habitat. These sensitive habitats are discussed further below.

It is understood that emissions from the proposed project would not be the only source of nitrogen deposition in sensitive habitat. There are existing industrial stationary (point) sources (such as Los Esteros Critical Energy Facility, which went operational in 2003) as well as mobile sources (i.e., transportation) in the project area that collectively contribute to elevated local and regional nitrogen deposition. To account for this, staff acquired shapefiles for the Community Multiscale Air Quality (CMAQ 2012) modeling-predicted values of annual total deposition and used data from 2012. While the data from CMAQ (2012) is dated, it is the most current known and available data for staff, and furthermore, is considered to still be conservative (despite Los Esteros Critical Energy Facility operation and other factors) in values reported. This is documented by the Santa Clara Valley Habitat Plan Final Environmental Impact Report/ Environmental Impact Statement Volume I, which states that "Overall ozone levels in the Bay Area, however, are expected to decrease over time (Santa Clara County 2012, page 16-12). For example, the Bay Area Air Quality Management District predicts that Bay Area NOx emissions would decrease from 521 tons per day to 357 tons per day by 2020. This decrease in emissions would be the result of extensive mitigation efforts at the federal, state, and local levels."

Serpentine Soils. Serpentine soils and associated plants such as the federally-endangered Metcalf Canyon jewelflower (*Streptanthus albidus ssp. albidus*) and Santa Clara Valley dudleya (*Dudleya abramsii ssp. setchellii*), and wildlife species such as federally-threatened Bay checkerspot butterfly (*Euphydryas editha bayensis*) and Opler's longhorn moth (*Adela operalla*) (state ranked S2: Imperiled – At high risk of extirpation in the state due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors) are designated nitrogen-sensitive pursuant to the SCVHP (SCVHP 2012, Figure 3-4). These plants are also listed under General Plan policy 1-6 and further regulated under policy MS-10.4. These species all occur within the San José East topographic quadrangle map where serpentine soils occur (to the northeast of the project site), where serpentine bedrock is mapped, see **Figure 4.4-2**. Background (existing) nitrogen deposition in this area is currently mapped at 9.19 kilograms of nitrogen per hectare per year(kg N/ha/yr), see **Figure 4.4-2**.

According to Pardo et al (2011) serpentine habitat has a critical load limit of 6.0 kg N/ha/yr (page 3,058). Project deposition for this area is modeled by Air Quality staff (using AERMOD; see **Section 4.3 Air Quality**) to be approximately zero (**Figure 4.4-3**). These figures are conservative, given the means in which they were modeled by Air Quality staff, such as modeling Tier 2 engines (the project proposes Tier 4 engines) for the

administrative generators as they represent the worst-case NOx emission sources, and selecting the maximum rate modeled in any of the 5 years for plotting, and assuming all NOx (in terms of NO from the stack) and all NH3 converts to atmospheric nitrogen see **Section 4.3 Air Quality** and **Appendix C**). Therefore, no impacts to serpentine habitat would occur.

Critical habitat. Critical habitat is a type of special-status habitat defined by the USFWS and consists of appropriate habitat for the California red-legged frog (*Rana draytonii*; formerly *Rana aurora draytonii*) to the north and east of the project within six miles of the project, where nitrogen deposition could have an impact. This conclusion is based on staff's experience with the modeled geographical extents of NOx deposition (**Figure 4.4-1**).

California red-legged frog critical habitat. Habitat for this species consists of riverine habitat, in "aquatic habitats including pools and backwaters within streams and creeks, ponds, marshes, springs, sag ponds, dune ponds and lagoons" (USFWS 2002). Background NOx deposition is modeled at 6.57 to 9.19 kg N/ha/yr (**Figure 4.4-2**).

Pardo et. al. do not define critical load for freshwater systems in the western U.S., indeed, as mentioned in Clair et al (2014, page 489) "A major shortcoming in this field of study is that no predictive modelling tools are currently available for nitrogen critical load in freshwater systems." Project NOx deposition has been modeled at zero kg N/ha/yr (**Figure 4.4-1**); this habitat and species have therefore been dismissed from further consideration of adverse nitrogen deposition impacts, as no impacts would occur.

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

Construction and Operation

No Impact. The proposed project site was historically used for agriculture around the 1930s, until the Fortune Drive and Olympus parcels were developed for other purposes in the 1980s and 1990s. Since then, the proposed project site has been used for industrial warehouse, manufacturing, and office purposes as well as associated surface parking. As previously discussed, all existing habitat is very disturbed and there are no riparian or sensitive habitats located on or adjacent to the proposed project site. Staff already considered the effects of nitrogen deposition on sensitive habitats, specifically serpentine habitat, and critical habitat for the California red-legged frog, under impact criterion "a", above. Modeling conducted by CEC Air Quality staff confirmed that nitrogen deposition would not have an impact on these sensitive habitats.

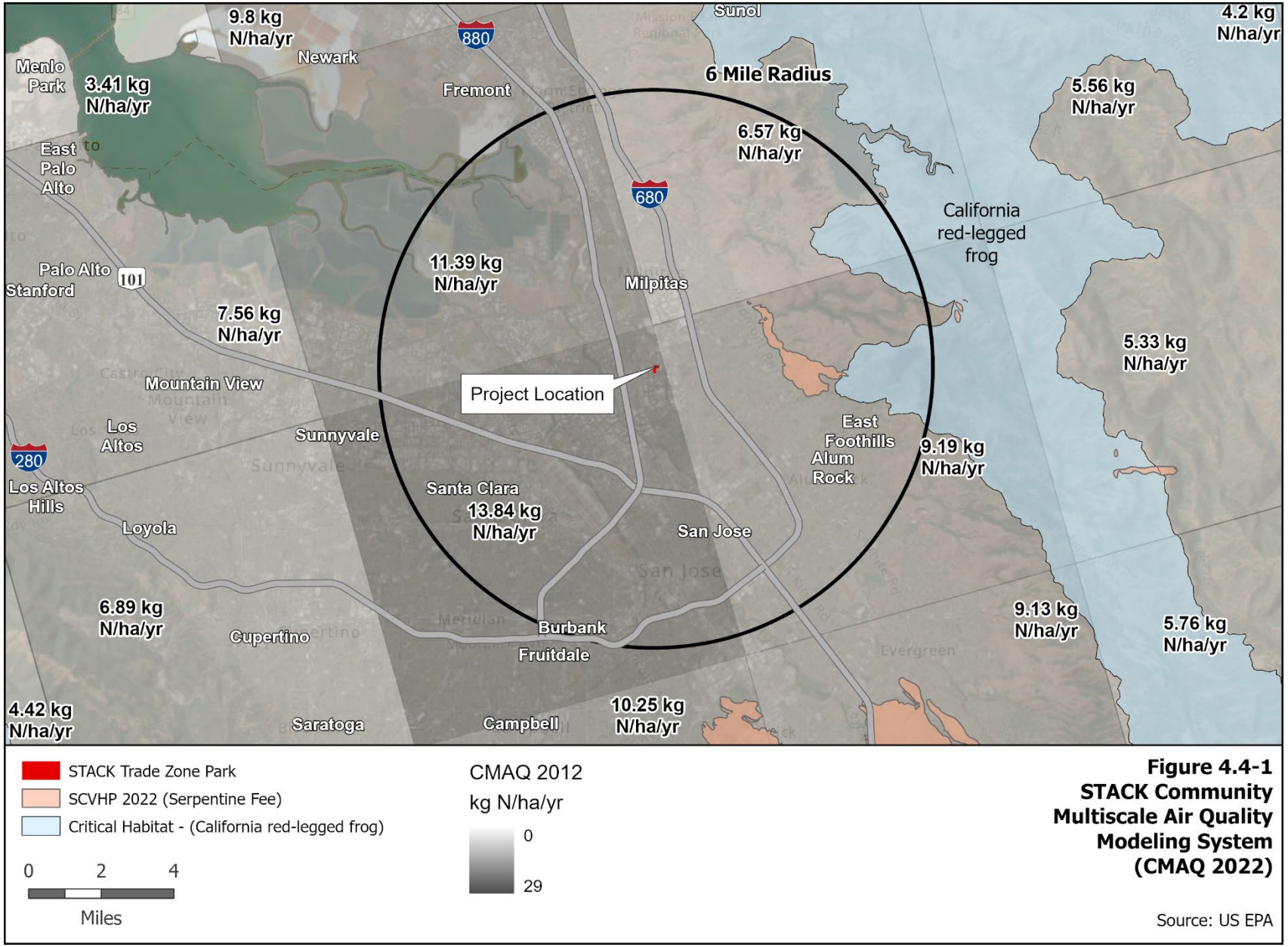

Figure 4.4-1
STACK Community Multiscale Air Quality Modeling System (CMAQ 2022)

Source: US EPA

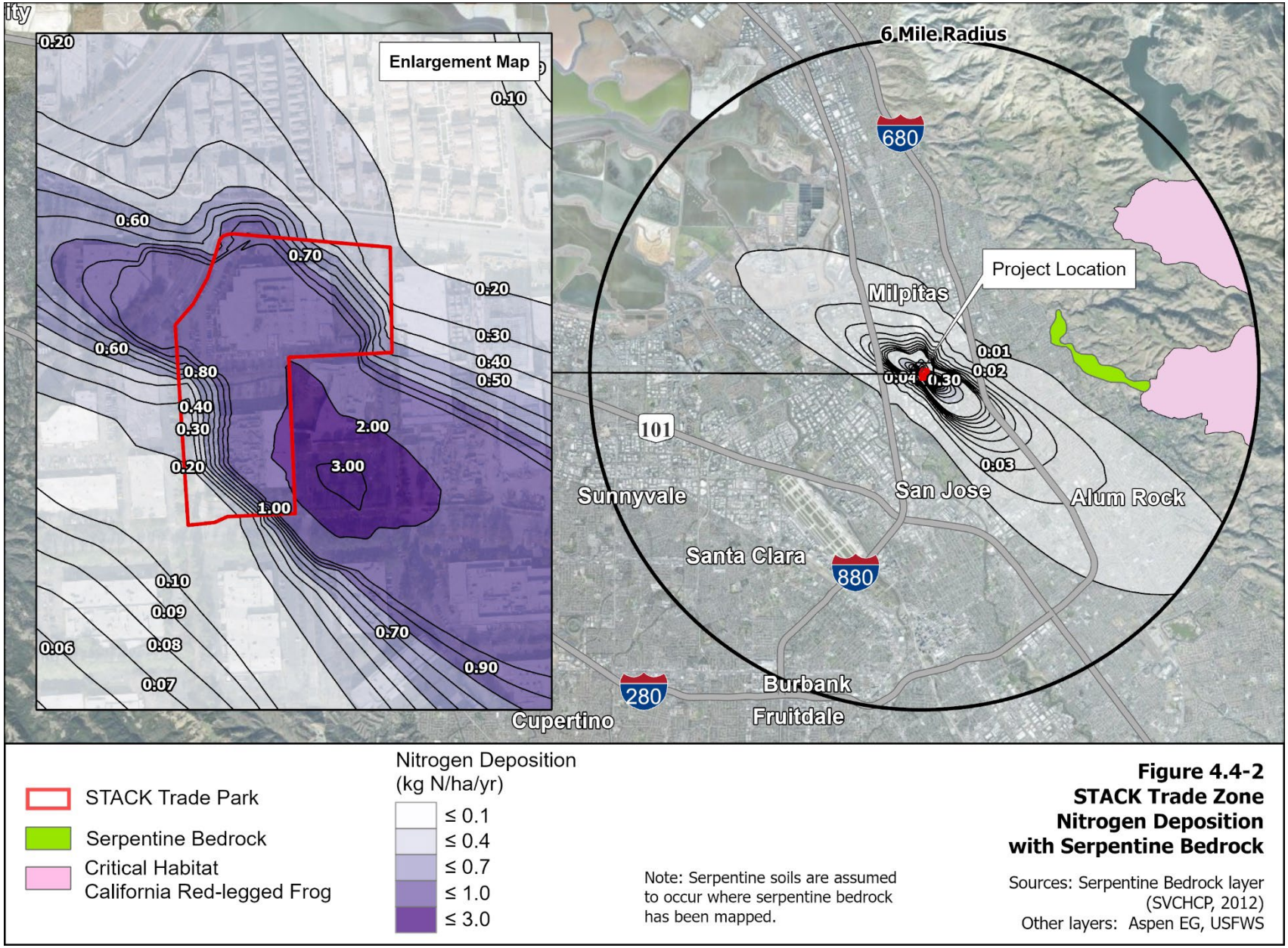

Figure 4.4-2
STACK Trade Zone Nitrogen Deposition with Serpentine Bedrock

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

There are no waters of the United States, including any protected wetlands, as defined by Section 401 and 404 of the Clean Water Act on the project site, nor waters of the state as defined by section 1600 of the CA Fish and Game Code. Coyote Creek is the nearest body of water, about a mile west from the project site, and is the main component of Coyote Creek watershed that flows north draining directly into San Francisco Bay. This is the largest watershed in Santa Clara County covering 321 square miles. The closest wetlands are freshwater emergent wetlands that border Coyote Creek about 2 miles northwest of the project site. The nearest estuarine and marine wetlands border Guadalupe River about 3 miles northwest of the project site. More of these estuarine and marine wetlands are over 4 miles northwest of the project site in Don Edwards San Francisco Bay National Wildlife Refuge and Baylands Park before turning into deep water lake and then the marine waters of San Francisco Bay (National Wetlands Inventory Mapper).

Construction

Less Than Significant Impact. Although there are no waters of the United States near the project site, construction activities, especially excavation of soil, would potentially produce sediments in surface water runoff. On-site adherence to discharge requirements for the control of solids and pollutants leaving the construction area, as required in the local National Pollution Discharge Elimination System (NPDES) authorization, as well as a Stormwater Pollution Prevention Plan written to be consistent with the NPDES would ensure that impacts to natural waterways would be avoided. The applicant did not propose a mitigation measure for this requirement. However, the project applicant is required to comply with the measures of the local NPDES, and a project specific SWPPP, would ensure impacts to any natural waterways during construction are less than significant.

Operation and Maintenance

Less Than Significant Impact. Impacts from operation and maintenance of the project would be similar to those anticipated during construction. The project design specifies drainage pipes would link to the existing sewer lines that are owned by the city of San José and wastewater would be treated by the San José/Santa Clara Regional Wastewater Treatment Plant. This design along with the bioretention areas would prevent overflow of floodwaters onto adjacent properties.

d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?

Construction and Operation

No Impact. The location of the proposed project is in an established urbanized area characterized by office and industrial uses. The proposed project site is already previously developed and any wildlife in the surrounding area, including any possible native residents, have already adjusted to the developed conditions and any activities associated with urbanization. The site and adjacent properties do not support wildlife species or provide natural areas that could serve as corridors for the movement of wildlife. The Coyote Creek corridor, located over 1 mile to the west of the proposed project, is the closest area where movement or land migration of native wildlife species would occur. Since the project site is not near or within an established wildlife corridor it would have no impact on any established wildlife corridor. It is approximately 3 miles from burrowing owl breeding habitat, and even closer to overwintering habitat, but the project would also have no effect on the use of these established breeding habitats. As previously mentioned above, it is possible for burrowing owls to travel onsite in addition to other migratory and nearby resident birds or potentially other wildlife living in the area (except for migratory fish as there are no rivers, creeks, or streams on or near the project area). The construction and ongoing operation of the project would not impede the movements of these visiting species. However, some wildlife species more sensitive to urban activity, especially construction, would be discouraged from attempting to use the project area as a resting, foraging, or breeding site. These species that are more sensitive to urbanization are already discouraged from other current businesses and other industrial operations in the area surrounding the proposed project. However, this would not be considered a "significant impact," and it is not a result specific to this project. Thus, the existence of the project would have no impact on the movement of any wildlife species or prevention of wildlife nurseries in the area.

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The project site is currently zoned Industrial Park and may be rezoned pending a current application. Currently the Olympus building is used as office space and the Fortune Drive building is unoccupied and waiting for demolition. Since the location of the proposed data center is previously developed there are no natural resources or protected habitats onsite. Vegetation is limited to the trees that were planted as part of the existing ornamental landscaping. Due to this lack of natural vegetation and habitats on the site, the project would not conflict with any conservation land use goals or policies protecting natural habitats that are part of the City of San José General Plan. However, as mentioned in the

Biological Resources section of the SPPE Application 4.4.2.1, part e (DayZenLLC 2021a), there are sections of the city's municipal code and general plan that protect trees.

Construction

Less Than Significant. A tree survey for the proposed transmission line route was conducted by HMH in November 2021. In June 2021, another tree survey was conducted by Anderson's Tree Care Specialists, Inc for the project site. There are a total of 156 trees onsite that would be removed, and construction activities might negatively impact an additional 54 trees along the transmission line route and 26 trees adjacent to the project site. Although there are 28 native trees along the transmission line route none of these trees are proposed to be removed, nor any of the trees adjacent to the project site. Of the 156 trees proposed for removal, 13 are native trees and only 10 of these native trees are ordinance size (DayZenLLC 2021d and DayZenLLC 2021c).

The San José Municipal Code defines an ordinance tree as a tree having a circumference of 38 inches (i.e., 12 inches in diameter, which includes the sum of multiple trunks that stem from the same tree), from a height of 54 inches (i.e., 4.5 feet). With few exceptions, the city requires a permit to plant, remove, or prune trees, including street trees, ordinance trees, and trees located on industrial or mixed-use property (San José 2022b, Chapter 13.28 and 13.32). To improve the well-being of the community forest, the San José General Plan includes multiple policies that focus on maintaining mature trees and, when tree removal is necessary, implementing design and construction best practices that promote an increase of native trees as well as the success of tree survival and overall growth of canopy coverage in the city. The city has adopted a Heritage Tree Ordinance List, which provides additional protection to old trees and trees that have historic value, that is implemented through policy MS-21.18. There is a strong emphasis on protecting native oak trees and sycamores and policy ER-1.5 further states that all native oak tree woodland and oak trees must be fully mitigated. There is no other guidance on replacement ratios of trees in the San José General Plan, except that it must be "appropriate tree replacement, both in number and spread of canopy" according to policy MS-21.5 (San José 2022a). However, there is some added clarification from the municipal code that the number of trees to be planted and the location, which depending whether enough space is available on the project site might be offsite within the city, would be specified within the permit if approved by the city's Planning Division staff (San José 2022b, 13.32.110, part C).

Since 156 trees onsite would be removed (13 are native), 10 trees would be replaced at a 5:1 ratio[1], 99 trees would be replaced at a 4:1 ratio, 47 trees would be replaced at a 1:1 ratio. The total number of replacement trees required to be planted would be 493 trees. The species of trees to be planted would be determined in consultation with the

1 11 of the trees on-site were unable to be measured for diameter. Therefore, those 11 trees were conservatively assumed to be of ordinance size and will be replaced at a 5:1 ratio of native, and a 4:1 ratio if non-native. Additionally, one tree's species was unrecognizable, therefore the tree was assumed to be native.

City Arborist and the Department of Planning, Building, and Code Enforcement. In the event the project site does not have sufficient area to accommodate the required tree mitigation, either the size of a 15-gallon replacement tree may be increased to 24-inch box and count as two replacement trees to be planted on the project site, or Off-Site Tree Replacement Fee(s) would be paid so that the city can use the off-site tree replacement fee(s) to plant trees at alternative sites.

The applicant has proposed measures to meet the city's ordinance for tree protection and maintenance. With the city's approval of a tree permit, the project would not conflict with a local policy or ordinance adopted for purpose of protecting biological resources, ensuring that impacts under this criterion would be less than significant.

Operation

Less Than Significant Impact. Once constructed, there is no indication that operation and maintenance of the project would require the removal of additional trees. However, if removal of trees becomes necessary in the future, the site owner would be required to comply with local policies and ordinances regarding the protection/replacement of trees. Furthermore, the project owner would be responsible for the well-being and successful growth of all the trees specified by the tree permit planted as replacement trees. Follow-up maintenance would be required and if any tree planting was unsuccessful during a period of three years, new trees would need to be replanted promptly to replace any that died, per the Municipal Code of City of San Jose', Section 13.32.110, part E (San José 2022b). Operating the data center and maintaining the buildings and on-site ornamental landscaping would involve levels of intrusion and disturbance similar to, or less than, that of office and industrial uses in the vicinity. Thus, impacts arising from a conflict with local policies and ordinances protecting biological resources would be less than significant.

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Construction and Operation

Less Than Significant with Mitigation Incorporated. The SCVHP (SCVHP 2012) provides for the protection and recovery of resources over a 519,000-acre study area encompassing most of the land in Santa Clara County. The location of the proposed project lies within this area, and thus the proposed project is considered covered by the SCVHP guidelines and applicable fees. Operation and maintenance of the proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan (the SCVHP), Natural Communities Conservation Plan, or other approved local, regional, or State habitat conservation plan or result in a significant direct or indirect impact after incorporating the following mitigation.

Non-point source emissions are considered in the SCVHP. As discussed above in impact criterion "a", non-point source emissions from the project would be significant without

mitigation. Implementation of **BIO-5** would reduce the projects impacts from nitrogen deposition to a less than significant level.

As previously discussed above the project does not fall within the burrowing owl fee zone, but because of low potential to occur onsite staff is recommending **BIO-2**, which includes protection measures for the burrowing owl.

With the implementation of **BIO-2** and **BIO-5,** project impacts arising from a conflict to the habitat conservation plan would be reduced to a less than significant level.

4.4.3 Mitigation Measures

BIO-1: Worker Environmental Awareness Program (WEAP)

A worker environmental awareness program (WEAP) biological resources module will be conducted for onsite construction personnel prior to the start of construction activities. The module will explain all the measures developed to prevent impacts on special-status species, including Western burrowing owl and golden eagle, and nesting birds. The module will also include a description of special-status species and their habitat needs, as well as an explanation of the status of these species and their protection under Endangered Species Act, California Endangered Species Act, and other statutes. A brochure will be provided with color photos of sensitive species, as well as a discussion of any permit measures. A copy of this WEAP program and brochure shall be provided for review and approval to Director or Director's designee with the City of San José Department of Planning, Building and Code Enforcement and the Santa Clara Valley Habitat Agency at least 30 days prior to the start of construction. This includes the following measures:

- Environmental Inspector: A qualified Environmental Inspector shall verify implementation and compliance with all mitigation measures. The Environmental Inspector shall have the authority to stop work or determine alternative work practices where safe to do so, as appropriate, if construction activities are likely to affect sensitive biological resources.
- Litter and Trash Management: Food scraps, wrappers, food containers, cans, bottles, and other trash from the project area shall be deposited into closed trash containers. Trash containers shall be removed from the project work areas at the end of each working day unless located in an existing substation, potential staging area, or the switching station site.
- Parking: Vehicles and equipment shall be parked on pavement, existing roads, and previously disturbed or developed areas, or work areas as identified in this document.
- Work Areas, Staging Areas: Work, staging, vehicle parking, and equipment parking areas shall be contained within the final areas that are negotiated with the relevant property owners, or as noted above.
- Pets and Firearms: No pets or firearms shall be permitted at the project site

BIO-2: Burrowing Owl Surveys, Monitoring, Prevention and Relocation

Part A: The project applicant shall conduct preconstruction surveys to ascertain whether burrowing owls occupy burrows on the site and along the utility alignments offsite prior to construction. The preconstruction surveys shall be performed by a qualified biologist and shall consist of a minimum of two surveys, with the first survey no more than 14 days prior to initial construction activities (i.e. vegetation removal, grading, excavation, etc.) and the second survey conducted no more than 2 days prior to initial construction activities. If no burrowing owls or fresh sign of burrowing owls are observed during preconstruction surveys, construction may continue. However, if a burrowing owl is observed during these surveys, occupied burrows shall be identified by the monitoring biologist and a buffer shall be established, as follows:

- If an active nest is found, a qualified biologist shall study nesting behavior and shall establish at a minimum a 250-foot non-disturbance buffer around all nest sites, based on stress response of the birds and the 2012 Staff Report (CDFW 2012). If the biologist determines that the nest is vacant, the non-disturbance buffer zone may be removed, in accordance with measures described in the SCVHP. The biologist shall supervise hand excavation of the burrow to prevent reoccupation only after receiving approval from the wildlife agencies (CDFW and USFWS) in accordance with Chapter 6, Condition 15 of the SCVHP.
- For permission to encroach within the nest buffer, (February 1st through August 31st), an Avoidance, Minimization, and Monitoring Plan shall be prepared and approved by the City and the wildlife agencies prior to such encroachment in accordance with Chapter 6 of the SCVHP.

An Avoidance, Minimization, and Monitoring Plan shall be prepared, provided to the agencies, and approved by the City Director of Planning, Building and Code Enforcement or their designee and the wildlife agencies prior to nest encroachment in accordance with Chapter 6 of the SCVHP.

Part B: Should a burrowing owl be located during the non-breeding season (September through January), a 250-foot buffer shall be established, and construction activities shall not be allowed within the 250-foot buffer of the active burrow(s) used by any burrowing owl unless the following avoidance measures are adhered to:

- A qualified biologist shall monitor the owls for at least 3 days prior to construction to determine baseline foraging behavior (i.e., behavior without construction).
- The same qualified biologist shall monitor the owls during construction. If the biologist determines there is a change in owl nesting and foraging behavior as a result of construction activities, these activities shall cease within the 250-foot buffer.
- If the owls are gone from the burrows for at least 1 week, the project applicant may request approval from the habitat agency to excavate all usable burrows within the proposed project area to prevent owls from reoccupying the site. After all usable

burrows are excavated, the buffer zone shall be removed, and construction may continue.

The project owner shall request approval from the Santa Clara Valley Habitat agency to excavate usable, unoccupied burrows within the project site during the non-breeding season.

Part C: In the event the voluntary relocation of site burrowing owls does not occur (defined as owls having vacated the site for 10 or more consecutive days), the project applicant can request permission to engage in passive relocation during the non-breeding season through the standard SCVHP application process (Section 6.8 of the SCVHP). If passive relocation is granted, additional measures may be required by the Habitat Agency.

- If the owls voluntarily vacate the site for 10 or more consecutive days, as documented by a qualified biologist, the project applicant could seek permission from the Santa Clara Valley Habitat Agency to have the qualified biologist take measures to collapse vacated and other suitable burrows to confirm that owls do not recolonize the site, in accordance with the SCVHP, by preparing a written request and submitting supporting documentation to the City Director or their designee.

BIO-3: Nesting Bird Avoidance and Minimization Measures

The project applicant shall schedule demolition and construction activities, **if at all feasible**, to avoid the nesting season. The nesting season for most birds, including most raptors in the San Francisco Bay area, extends from February 1st through August 31st (inclusive).

If any construction or demolition activities, including tree or vegetation removal or ground disturbance, occurs during the nesting season (February 1 through August 31), the project applicant shall adhere to the following guidelines:

- The project applicant shall submit the resume of an ornithologist or other qualified biologist (with at least a bachelor's degree in a biological science field and demonstrated field expertise in avian species) for approval by the City of San José.
- The pre-approved ornithologist or other qualified biologist (Designated Biologist, DB) shall conduct at least two pre-construction nest survey(s). The two pre-construction surveys shall be separated by a minimum 11-day interval and conducted no more than 14 days prior to initiation of any construction activity. One survey shall be conducted within the 3-day period preceding initiation of construction activity. Additional follow-up surveys may be required if periods of construction inactivity exceed two weeks in any given area, an interval during which birds may establish a nesting territory and initiate egg laying and incubation.
- Surveys shall cover all potential nesting habitat and substrate within the project site and any offsite facilities (i.e., electrical transmission line, staging area, employee parking) and publicly accessible areas within 500 feet of the project boundary. Any habitat areas adjacent to the project site but not publicly accessible shall be surveyed

with binoculars. These surveys shall include the orders Falconiformes and Strigiformes (raptors and owls). Surveys shall be conducted at appropriate nesting times and concentrate on potential roosting or perch sites.

- If active nests are detected during on-site surveys, a no-disturbance buffer zone (protected area surrounding the nest) shall be established around each nest with fencing, flagging and/or signage, as appropriate. Initially each nest will have the following buffer zone: 150 feet for any migratory bird nests, 250 feet for any raptor and owl nests (including burrowing owl), and 500 feet for any special status species. Ultimately, the size of each buffer zone shall be determined by the Designated Biologist in consultation with the California Department of Fish and Wildlife (CDFW) and the Santa Clara Valley Habitat Agency. Collaboration to determine the appropriate buffer size for each nest found should be based upon the species, topography, behavior of the nesting birds, and type of activity that would occur in the vicinity of the nest. Once the buffer zone is established, other than the DB adjusting the buffer zone, it shall remain undisturbed and no construction activities, as defined above, shall occur within the buffer zone the DB and City of San José verifies that the nest(s) are no longer active.
- If active nests are detected during the surveys, the DB shall monitor the nest weekly (at least once a week for special status species) until the DB determines that nestlings have fledged and dispersed, or the nest is no longer active. This applies to both onsite and offsite nests. If signs of disturbance or distress are observed, the DB shall immediately implement adaptive measures to reduce disturbance. These measures may include, but are not limited to, increasing buffer size, halting disruptive construction activities in the vicinity of the nest until fledging is confirmed, or placement of visual screens or sound-dampening structures between the nest and construction activity, where possible. The DB shall have sole authority not only to order the cessation of nearby project activities, but also when to resume project activities based upon the observed behavior of the nesting pairs and whether the nesting pairs continue to exhibit signs of distress.
- If active nests of special-status species are detected during pre-construction surveys or during project construction, the Director or their designee for the City of San José's Department of Planning, Building and Code Enforcement shall be notified within 24 hours. A letter through email may be used initially and shall state how impacts of any nesting birds will be avoided by citing the appropriate information from this mitigation measure. The final notification shall include all the reporting elements as described below. This guideline shall also apply to any new nests discovered during project construction. All other guidelines above shall be followed.

BIO-4: Avian Reporting and Avian Protection Plan

The designated biologist shall be responsible for preparing the pre-construction nest survey reports (including the burrowing owl survey report per **BIO-2**). The report(s) shall include the time, date, methods, and duration of the surveys; identity and qualifications of the surveyor(s); and a list of species observed. If active nests are detected during the

surveys, the reports shall also include a map made using GPS technology or aerial photo identifying the location of the nest(s), species, and a depiction of the boundary of the no-disturbance buffer zone around the nest(s). As new nests are discovered during construction, or buffer zones are adjusted, this map of bird nests should be updated. Inactive nests should be indicated by color in order to more visually comprehend where active nests are located.

A compilation shall be made of the pre-construction nest survey reports, including a summary of all the guidelines contained in **BIO-2** and **BIO-3**. This compilation, known as the Avian Protection Plan, shall be submitted to the Director or their designee for the City of San José's Department of Planning, Building and Code Enforcement prior to any construction activities for review and approval.

BIO-5: Non-Point Source Nitrogen Deposition Fee

Pursuant to the 2012 Santa Clara Valley Habitat Plan (SCVHP) (Chapter 6 and Section 9, Table 9-7b), prior to any ground disturbance, a one-time fee payment for new daily vehicle trips shall be paid for mobile emission sources, as based on the appropriate fees and worksheet (year current to construction) in the 2022 SCVHA, or most recent Nitrogen Deposition Fee Worksheet. Fees are paid to the Santa Clara Valley Habitat Agency.

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4.5 Cultural and Tribal Cultural Resources

This section describes the environmental setting and regulatory background and discusses the impacts associated with the construction and operation of the proposed project with respect to cultural and tribal cultural resources.

CULTURAL RESOURCES Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☒	☐	☐
b. Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c. Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

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

Environmental checklist established by CEQA Guidelines, Appendix G.

4.5.1 Environmental Setting

This section assesses the potential impacts of the proposed project on cultural and tribal cultural resources. The section considers four broad classes of cultural resources: prehistoric, ethnographic, historic-period, and tribal cultural resources. The next four paragraphs briefly describe these classes of resources along with the definitions of project

area and project site. Afterward, the Cultural and Tribal Cultural Resources section presents the environmental setting pertinent to these resources. The rest of this environmental impact report (EIR) section covers:

- *Prehistoric, ethnographic, and historic contexts* - generally describes who lived in the project vicinity, the timing of their occupation, and what uses they made of the area
- *Methods of analysis* - establishes what kinds of physical traces (cultural and tribal cultural resources) past peoples might have left in the project site, given the project vicinity's prehistoric, ethnographic, and historic contexts
- *Results* ensuing from those methods - identifies the specific resources present or expectable in the project site
- *Regulatory setting* - presents the criteria for identifying *significant* cultural and tribal cultural resources under the California Environmental Quality Act (CEQA) and other applicable authorities, as well as criteria for identifying significant impacts on these resources
- *Impacts* - identifies any impacts on cultural and tribal cultural resources, along with the severity of any such impacts
- *Mitigation measures* - proposes measures to avoid, minimize, rectify, reduce or eliminate, or compensate for identified impacts

Prehistoric archaeological resources are those materials relating to Native American occupation and use of a particular environment. These resources may include sites and deposits, structures, artifacts, rock art, trails, and other traces of Native American activity. In California, the prehistoric period began more than 12,000 years ago and extended through the eighteenth century until A.D. 1769, when Europeans first settled in California.

Ethnographic resources are those materials important to the heritage of a particular ethnic or cultural group, such as Native Americans or African, European, or Asian immigrants. They may include traditional resource collecting areas, ceremonial sites, topographic features, value-imbued landscapes, cemeteries, shrines, or neighborhoods and structures. Ethnographic resources are variations of natural resources and standard cultural resource types. They are subsistence and ceremonial locales and sites, structures, objects, and rural and urban landscapes assigned cultural significance by traditional users. The decision to call resources "ethnographic" depends on whether associated peoples perceive them as traditionally meaningful to their identity as a group and the survival of their lifeways.

Historic-period resources are those materials, archaeological and architectural, usually but not necessarily associated with Euro-American exploration and settlement of an area and the beginning of a written historical record. They may include archaeological deposits, sites, structures, trail and road corridors, artifacts, or other evidence of historic human activity. Under federal and state requirements, historic period cultural resources must be 50 years or older to be considered of potential historic importance. A resource

less than 50 years of age may be historically significant if the resource is of exceptional importance. The Office of Historic Preservation (OHP 1995, page 2) endorses recording and evaluating resources 45 years or older to accommodate a five-year lag in the planning process.

Tribal cultural resources are a category of historical resources introduced into CEQA by Assembly Bill 52 (Statutes 2014). Tribal cultural resources are resources that are any of the following: sites, features, places, cultural landscapes, sacred places, or objects that are included in or determined eligible to the California Register of Historical Resources (CRHR) or are included on a local register of historical resources as defined in Public Resources Code, section 5020.1(k). Tribal cultural resources can be prehistoric, ethnographic, or historic.

The project site is defined by all project-related construction, including the 10-acre area between 2400 Ringwood Avenue and 1849 Fortune Drive (Assessor's Parcel Nos. [APN] 244-17-016 through 244-17-055), approximately 2,400 combined linear feet of proposed new above- and below-ground transmission line within the existing rights-of-way, and any staging areas.

The project area is defined as the project site plus a one building band around it.

Prehistoric Context

The archaeological record in the Santa Clara Valley began about 9,000 years before present (B.P., or A.D. 1950) with the Metcalf Creek Aspect, the local expression of the Millingstone cultural pattern. Archaeological deposits dating to this time contain milling slabs and handstones, and large wide-stemmed and leaf-shaped projectile points. Native people during this period were mobile foragers and burials were typically flexed (knees pulled up toward the chin) and placed beneath millingstone cairns (Milliken et al. 2007, page 114).

This Early Holocene culture extended until the beginning of the Early Period (about 5500 B.P.), which exhibits developments in groundstone technology (i.e., replacing millingstones with the mortar and pestle), less movement of entire communities, regional symbolic integration between cultural groups, and increased trade. Also referred to locally as the Sandhill Bluff Aspect, this cultural pattern lasted until circa 2500 B.P., when the Lower Middle Period began with a "major disruption in symbolic integration systems." (Milliken et al. 2007, page 115). Archaeological assemblages from the Lower Middle Period include more olive snail-shell saucer beads and circular abalone shell ornaments (and the disappearance of the rectangular shell beads), as well as bone tools and whistles.

The Upper Middle Period began about 1520 B.P. with a disruption of the olive snail-shell bead trade network, abandonment of some village sites, an increase in sea otter bones in those sites not abandoned, and changes in shell bead manufacture. Some South Bay burials from this period were extended rather than flexed, and grave goods were lacking. (Milliken et al. 2007, page 116).

The Late Period began about 900 B.P., with groups increasing the creation of wealth objects, as seen in burials. Smaller projectile points for use in the bow and arrow emerged during this period along with increasing evidence of social stratification as seen in some of the mortuary evidence. As an example, the introduction of cremation was seen among the wealthiest of individuals. (Milliken et al. 2007, page 117).

Archaeological research in the project vicinity reveals a rich and lengthy archaeological record. Archaeologists have found numerous buried Native American sites throughout the lower Santa Clara Valley. Coyote Creek and the Guadalupe River buried generations of Native American sites under layers of silt and clay. As a result, the surface archaeological record of Santa Clara Valley represents only the last 2,000 years of human occupation. The remaining 7,000 years of native history lay anywhere from near surface up to 75 feet below the modern ground surface (Jones et al. 2007, page 130; Rosenthal and Duval 2008, page 26).

Ethnographic Context

The Costanoans, or Ohlone, are the Native Americans who inhabited the Bay Area since time immemorial. The Costanoan designation refers to those who spoke one of eight separate but related languages (Shipley 1978, pages 84, 89). The Costanoan languages are related to Miwok and are part of the Yok-Utian language family of the Penutian stock (Golla 2007, pages 75–76). Tamyen (Santa Clara Costanoan) was spoken around the southern end of San Francisco Bay and the lower Santa Clara Valley and was spoken by Costanoans in the project vicinity (Milliken et al. 2007, Figure 8.1; Shipley 1978, pages 84 and 89).

Each village was a separate and politically autonomous tribelet, with about 200 people living within each. Tribelets were the basic unit of political organization, with chiefs, either women or men, descended from their patrilineal relative. In the late 1700s, there were two tribelets near the proposed project site, San José Cupertino and Santa Clara; both are presumably Tamyen speakers. (Levy 1978, Figure 1).

Like most other Native Americans in California, acorns were the staple food of the Costanoan people in the Santa Clara region. Other nuts such as buckeye, California laurel, and hazelnuts were also eaten. The Costanoans set controlled fires to promote the growth of the nuts and seeds upon which they relied and to provide grazing areas for large mammals. The primary mammals taken by the Costanoan included the black-tailed deer, elk, antelope, grizzly bear, mountain lion, sea lion, and whale. Waterfowl, salmon, steelhead, and lampreys were also important components of the Costanoan diet. (Levy 1978, page 491).

Thatched, domed houses were the most common type of structure for the Costanoans. Sweathouses along the banks of rivers were also constructed, in addition to dance enclosures and assembly houses. (Levy 1978, page 492).

Deceased individuals were either buried or cremated on the day of death. The community either buried the deceased's property with the body or destroyed their property (Kroeber 1976, page 469; Levy 1978, page 490).

Trade was important for the Costanoan groups, and their primary partners in trade were the Plains Miwok, Sierra Miwok, and Yokuts. The Costanoan provided coastal resources such as mussels, abalone shell, dried abalone, and salt to the Yokuts in exchange for piñon pine nuts. The Miwok obtained olive snail shells from the Costanoans (Levy 1978, page 488).

A common archaeological manifestation of a Costanoan village site is the shell mound deposit (Kroeber 1976, page 466). Mussels are the primary shells that constitute these mounds, in addition to other household wastes.

The Spanish established seven missions in Costanoan territory between 1770 and 1797. By 1810, the mission system subsumed the last Costanoan village. Missions in the Bay Area mixed various language and cultural groups including the Esselen, Foothill Yokuts, Plains Miwok, Saclan Miwok, Lake Miwok, Coast Miwok, and Patwin. The mission closest to the proposed project site was Santa Clara de Asís, built in 1777. The mission is no longer extant (in existence), but the area is still rich in archaeological manifestations from the mission period and before (Levy 1978, page 486).

Historic Context

To inform understanding of the potential significance of built environment resources in the project vicinity, a review of the major historical timeline markers for the project area provides context. This subsection offers a brief look at those events and trends in the history of the Santa Clara Valley and San José that provide that context for the project area:

- Spanish Mission Period
- Mexican Period
- American Period
    - Project Site History

Spanish/Mission Period (1769 to 1821)

The 1769 expedition led by Captain Gaspar de Portolá initiated the period of contact between Spanish colonists and the native people of the Santa Clara Valley. The expedition led by Sergeant José Ortega reached the Santa Clara Valley in the fall of that year and began the process of Spanish settlement of the valley. A year later, Pedro Fages led an expedition that explored the eastern shore of San Francisco Bay, eventually reaching the location of modern-day Fremont, where they traded with the local native people. In 1772, a second Fages expedition traveled from Monterey and passed through the Santa Clara Valley (Heller-Leib et al. 2022, page 14).

In 1774, Captain Fernando Rivera y Moncada, scouting locations for a mission and military installment, encountered local Indian people in the Santa Clara Valley. In 1776, a mission scouting expedition under the leadership of Juan Bautista de Anza and Friar Pedro Font traveled through the same area and traded with residents of native villages encountered along the way. Font recorded that the party had observed 100 native people while traveling through the valley (Heller-Leib et al. 2022, pages 14–15).

The Catholic Church established missions to convert and civilize the native population. The first mission in the San Francisco Bay Area was established in San Francisco with the completion of Mission San Francisco de Asís (Mission Dolores) in 1776. Mission Santa Clara de Asís followed in 1777, and Mission San José in 1797. The missions relied on the Native American population both as their source of Christian converts and their primary source of labor. Diseases introduced by the early expeditions and missionaries, and the contagions associated with the forced communal life at the missions, resulted in the death of many local peoples. By 1832, the Ohlone population had been reduced from over 10,000 in 1770 to less than 2000 (Heller-Leib et al. 2022, page 15).

Within a period of 25 years after the founding of Mission Santa Clara, most local native peoples had been affected by the presence of the missionaries. Though some Indians gave up their traditional way of life by choice, many were coerced, manipulated, and forced to the mission (Heller-Leib et al. 2022, page 15).

By the mid-1790s, the traditional Ohlone economy had been significantly disrupted. Native populations outside the Mission had suffered losses to Spanish disease, a decline in food resources, a disrupted trade system, and a significant drought in 1794. Mission records of 1794 and 1795 show that 586 Native Indians were baptized. While earlier baptisms were composed primarily of children, 80 percent of the converts during this period were adults indicating the independent tribal elders had finally been brought into the mission system (Heller-Leib et al. 2022, page 15).

The next several decades represent a time of relative stability throughout the Santa Clara Valley. During this period, the Spanish and Mexican population outside of the Mission grew in numbers, power, and prosperity, and Mexico, having gained its independence from Spain, began administering the 21 California missions (Heller-Leib et al. 2022, page 15).

Mexican Period (1821 to 1848)

In the early 1800s, cattle ranching for the hide and tallow trade became the principal economic activity in the Santa Clara Valley. By 1820, growing traffic in hides and tallow encouraged foreign trade, and as Americans and Europeans settled California during the 1830s and 1840s, many were attracted to San José and the Santa Clara Valley. With a population of about 500 at the time of the Gold Rush, San José was the largest town in northern California, located in a fertile and largely undeveloped valley (Heller-Leib et al. 2022, page 15).

With their victory in the Mexican American War (1846–1848), the United States took possession of California and Anglo-European settlers began to arrive in the Santa Clara Valley. The 1848 Gold Rush brought an unprecedented wave of settlers, many of whom acquired land and turned their attention to agriculture. During the early Gold Rush, the high costs and relative scarcity of flour and fresh fruit and vegetables made agricultural and commercial pursuits just as profitable and more dependable than mining (Heller-Leib et al. 2022, page 15).

American Period (1848 to Present)

In November of 1849, San José became the first capital of the State of California. The establishment of San José as the state capital caused a rapid increase in population, and the city began to develop in an orderly grid-like pattern. The following decades were marked by a transition from the ranching economy favored by Spanish and Mexican landholders to an economy based at first on grain agriculture, such as wheat, then increasingly on orchard and specialty vegetable agriculture. By the 1860s, orchards were being set out in East San José and Milpitas in the vicinity of the project area (Heller-Leib et al. 2022, pages 15–16).

Throughout the mid-nineteenth century, San José experienced increasing prosperity with American farms spreading all over the valley and farmers and their families looking to San José as a mercantile center. The railroad arrived in the 1860s, opening large markets for agricultural products and bringing more settlers to the valley. Municipal services in San José were expanded, streets built, street cars introduced, gas, water, and sewer systems organized, and educational facilities developed (Heller-Leib et al. 2022, page 16).

The Santa Clara Valley joined in the expansion statewide of wheat farming with the growing towns of San José and Santa Clara serving as key trading centers for the region. By 1854, Santa Clara County was producing 30 percent of California's total wheat crop. The French prune, introduced to the region by Louis Pellier at his nursery, City Gardens, on St. James Street, also became an important regional crop. The San Francisco and San José Railroad connected the two cities in 1864 and primarily transported agricultural products (Heller-Leib et al. 2022, page 16).

In the 1880s, orchards and vineyards took root in the valley with peak land use in the 1930s with over 110,000 acres in production. Roughly 85,000 acres were devoted to prune cultivation, which at the time comprised one-third of global production. The fruit canning and packing industries, and other support industries including food processing, and spraying equipment, "quickly grew to become the urban counterpart of the valley's orchards" (Heller-Leib et al. 2022, page 16). The American Can Company, a major local producer, was churning out over ten million cans of prunes by 1919. Other major crops grown in the Santa Clara Valley included tomatoes, grains, onions, carrots, pumpkins, cherries, walnuts, raspberries, loganberries, and strawberries (Heller-Leib et al. 2022, page 16).

Between 1890 and 1920, the Santa Clara Valley became the single most important fruit and vegetable canning hub in the United States. This dominance of fruit production/processing continued until World War II, though the production and processing of fruit remained a mainstay of Santa Clara Valley's economy until the 1960s (Heller-Leib et al. 2022, page 16).

Following WWII, population growth continued to expand urban boundaries and the rural land-use pattern was increasingly supplanted by residential dwellings, commercial hubs, and the expansion of research and development and manufacturing linked with the electronics sector. The war served as a catalyst for both industrialization and then a post-war population and housing boom. The advent and expansion of the railroad, and subsequently the road system, aided the rise of heavy industry (Heller-Leib et al. 2022, page 16).

With the expansion of non-agricultural industries (e.g., electronic and defense industries) after WWII, "the population of the valley experienced phenomenal growth after 1950. Between 1950 and 1975 the population increased from 95,000 to over 500,000" (Heller-Leib et al. 2022, page 16). With such an increase in population, the city began to spread, replacing orchards with subdivisions and shopping centers. From a total of 17 square miles in 1950, the city reached over 120 square miles by 1970 (Heller-Leib et al. 2022, page 16).

Project Site

The following is a summary of the archival research conducted, and additional sources of information utilized to prepare the following site-specific development overview of the project site and project area.

The project site is the area defined by all project-related construction, including the 10-acre area between 2400 Ringwood Avenue and 1849 Fortune Drive (APN 244-17-016 through 244-17-055), approximately 2,400 combined linear feet of proposed new above and below ground transmission line within the existing right of way, and any staging areas. The project area is defined as the project site and a one-building-band buffer around it.

The Thompson and West (1876, cited in Heller-Leib et al. 2022, page 19) map indicates the project area occupies the border region between what became known as Rincon De Los Esteros and the Milpitas ranchos. In the late nineteenth century, the project area intersected a 250-acre apportionment owned by John Trimble, who died in 1899. By 1890, the Official Map of Santa Clara indicates that the 250-acre apportionment was still in possession of Trimble (Heller-Leib et al. 2022, page 19).

Sanborn Fire Insurance maps for San José dating from 1884, 1891, and 1915 do not include the lands associated with the project area. Further review of the revised 1915 maps updated in 1950 indicate that the project area remained unmapped by the Sanborn Company (Heller-Leib et al. 2022, page 19).

The United States Geological Survey topographical maps from 1889 through the beginning of the twentieth century depict the project area as either undeveloped or containing agricultural land. A review of aerial photographs dating from 1940 to 2018 was also completed as part of the literature review. In 1940, the project area was agricultural land, with numerous orchards and open fields occupying the surrounding area. The property remained undeveloped or was used as rural agricultural farmland until at least the late 1960s. The establishment of Fortune Drive occurred sometime between 1968 and 1980, at which point large scale industrial or commercial buildings were constructed (Heller-Leib et al. 2022, page 19).

Between 1980 and 1987, aerials indicate that the project area remained unchanged, with the surrounding region becoming increasingly developed and the agricultural uses abandoned for light-industrial and commercial development. Except for the two historic period structures at 2001 Fortune Drive (APN 244-17-003) and 1700 Montague Expressway (APN 244-24-004), all structures within the project area (i.e., the project site and a one-building-band buffer around it) were constructed in or after 1979. The residential development north of Trade Zone Boulevard was completed circa 2015 (Heller-Leib et al. 2022, page 19).

Project Linears

The project linears (electrical supply and potable water) would pass through already developed areas. To serve the project, PG&E would construct a "looped" transmission interconnection involving two offsite transmission lines. The first extension would involve a line from the west that comprises a single circuit 115-kilovolt (kV) overhead transmission line from the existing PG&E Newark-Milpitas #2 115-kV Line which is located on the southwest side of the intersection of Trade Zone Boulevard and Montague Expressway. The route to the project site would be approximately 0.25 mile and the line would be supported on existing transmission towers located along the south side of Trade Zone Boulevard (DayZenLLC 2022n, page 30). It is possible that up to three or more of the existing seven overhead transmission towers may need to be replaced. The four to six new tubular steel poles would be between 70 and 130 feet in height (DayZenLLC 2022s).

The second transmission line loop would be a single circuit 115-kV underground transmission line that would interconnect the existing PG&E Newark-Milpitas #2 115 kV Line which is located on the southeast side of the intersection of Trade Zone Boulevard and Montague Expressway. The route to the project site for the second line would be approximately 0.25 mile and would be underground within the northern side of Trade Zone Boulevard right of way and then cross from north to south to the site. A trenching depth is not mentioned (DayZenLLC 2022n, page 30). **Figure 3-3** in **Section 3 Project Description** shows the route of the overhead and underground transmission lines.

Additionally, the project intends to relocate an existing public potable water line in a public utility easement on-site, although a specific depth is not mentioned (DayZenLLC 2022n, page 43).

Methods

The methods employed for the cultural resources analysis include determining a project area of analysis (PAA); reviewing records and other documents provided by a literature search and other historical sources as needed; consultation with California Native American tribes; and historic architectural and archaeological surveys.

Project Area of Analysis

The PAA defines the geographic area in which the proposed project has the potential to affect cultural or tribal cultural resources. Effects may be immediate, further removed in time, or cumulative. They may be physical, visual, audible, or olfactory in character. The PAA may or may not be one uninterrupted expanse. It could include the site of the proposed project (project site), the routes of requisite transmission lines and water and natural gas pipelines, and other offsite ancillary facilities, in addition to one or several discontiguous areas where the project could arguably affect cultural or tribal cultural resources. The PAA has archaeological, ethnographic, and historic built environment components, as described in the following paragraphs.

The California Energy Commission (CEC) staff defines the archaeological component of the PAA as all areas where the applicant proposes ground disturbance to construct and operate the proposed project. This includes the proposed building sites, demolition, parking, landscaping, areas to be graded, staging areas, access roads, perimeter fence, electrical substation, subsurface drainage, electrical transmission line, sanitary sewer line, reclaimed water line and potable water line. The application describes estimated excavation depths for the proposed project elements:

- Proposed site grading, maximum of 2 feet below ground surface (DayZenLLC 2022n, page 41)
- Any drainage facilities would be up to 6 feet-8 inches below ground surface (DayZenLLC 2022n, page 41)
- The relocation of an existing public potable water line in a public utility easement on-site at unspecified depth (DayZenLLC 2022n, page 43)
- Excavation of a single circuit 115-kV underground transmission line, 0.25-mile long at an unspecified depth (DayZenLLC 2022n, page 30)

For ethnographic resources, the PAA considers sacred sites, tribal cultural resources, traditional cultural properties (places), and larger areas such as ethnographic landscapes that can be vast and encompassing, including view sheds that contribute to the historical significance of such resources. The Native American Heritage Commission (NAHC) assists cultural resources consultants and agency staff in identifying these resources, and consultation with Native Americans and other ethnic or community groups may contribute to defining the PAA. In the case of the proposed project, the immediate environs consist largely of existing office parks, industrial structures, a channelized creek, and a freeway.

Staff therefore treats the ethnographic component of the PAA the same as the archaeological component.

The historic built environment PAA for this project includes buildings and structures within a one-building/parcel-band surrounding the project site. The built environment PAA is part of a fully built-up urban environment with a mix of modern industrial, commercial, and residential building types.

Literature Review

The literature review for this analysis consisted of a records search at the California Historical Resources Information System (CHRIS), review of the application for small power plant exemption, and examination of pertinent literature concerning cultural resources in the northern Santa Clara Valley.

On behalf of the applicant, PaleoWest Archaeology (PaleoWest) conducted a records search on January 20, 2022, at the Northwest Information Center (NWIC) of the CHRIS. The NWIC is the State of California's official repository of cultural resource records, previous cultural resources studies, and historical information concerning cultural resources for 16 counties, including Santa Clara County. The records search area included the project site and a 0.25-mile buffer (Heller-Leib et al. 2022, page 17). In addition to the NWIC's maps of known cultural resources and previous cultural resources studies, the records search included a review of historic maps, aerial photographs, the City of San José Public GIS Viewer, and the OHP's Archaeological Determinations of Eligibility (Heller-Leib et al. 2022, pages 19–20 and Confidential Appendix A).

In addition, the CEC staff examined historic maps and aerial photographs of the PAA and vicinity to identify cultural resources (DayZenLLC 2021b, Appendix F and G; DayZenLLC 2021e, Appendix H-K; Historic Aerials 2022). These sources depict the historic appearance of the PAA each decade from 1897 through 2016.

The CEC staff also consulted the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), Historic American Building Survey, Historic American Engineering Record, Historic American Landscape Survey, Office of Historic Preservation Built Environment Resource Directory, City of San José Historic Resource Inventory (San José 2009, pages 42–54), and County of Santa Clara Historic Context Statement (Santa Clara 2012).

Tribal Consultation

Applicant's Correspondence*.* PaleoWest, on behalf of the applicant, contacted the NAHC on November 16, 2021, to request a search of the Sacred Lands File and a list of tribes that might be interested in the proposed project. The NAHC responded on December 29, 2021, and provided a list of 10 California Native American tribes to contact:

1. Amah Mutsun Tribal Band
2. Amah Mutsun Tribal Band of Mission San Juan Bautista

3. North Valley Yokuts Tribe
4. Muwekma Ohlone Indian Tribe of the San Francisco Bay Area
5. Rumsen Am:a Tur:ataj Ohlone
6. Tamien Nation
7. The Confederated Villages of Lisjan
8. The Ohlone Indian Tribe
9. Indian Canyon Mutsun Band of Costanoan
10. Wuksache Indian Tribe/Eshom Valley Band

PaleoWest did not send outreach letters to the above-mentioned tribes (Heller-Leib et al. 2022, page 21).

The CEC's Consultation. The California Environmental Quality Act (CEQA) requires lead agencies to consult with all California Native American tribes that have traditional and cultural affiliation with the geographic area of a project, and that have previously requested consultation. To invoke an agency's requirement to consult under CEQA, a tribe must first send the lead agency a written request for formal notification of any projects within the geographic area with which they are traditionally and culturally affiliated. (Pub. Resources Code, § 21080.3.1(b)). The CEC has received requests for formal notification from the Tamien Nation and Wucksache Indian Tribe/Eshom Valley Band, which have traditional and cultural affiliation with the geographic area of the proposed project. Therefore, the CEC has formal tribal consultation requirements under CEQA with respect to these two tribes.

Additionally, consistent with the CEC's tribal consultation policy (CEC 2017), the CEC staff contacted the NAHC on April 1, 2022, to request a search of the Sacred Lands File and a list of California Native American tribes that might be interested in the proposed project. The NAHC responded on April 25, 2022 and provided a list of nine California Native American tribes to contact; the listed tribes were the same as the contact list provided to the applicant with the exception of one tribe (Rumsen Am:a Tur:ataj Ohlone was removed). The CEC staff mailed consultation letters to these nine tribes on May 11, 2022; the letters included CEQA consultation requests for two tribes, Tamien Nation and the Wuksache Indian Tribe/Eshom Valley Band, both of which have notified the CEC of their desire to consult on the CEC's projects in their aboriginal territory (CEC 2022c). See the following subsection, "Results," for tribal responses.

Archaeological Survey

On November 23, 2021, a PaleoWest archaeologist surveyed the following area, which corresponds to the staff-defined archaeological PAA (Heller-Leib et al. 2022, page 21):

- project site
- proposed offsite utility routes.

The PaleoWest archaeologist completed an intensive pedestrian survey of the project site at that time. The survey was completed beginning from the eastern end of the transmission line, at the location of the newly planned switchyard, and heading west along Trade Zone Boulevard. The project site was then surveyed heading east along Trade Zone Boulevard's northern side. During the initial windshield and pedestrian surveys, the general project site and exteriors of the buildings/structures within the project site were photographed and recorded. PaleoWest staff examined 100 percent of all exposed ground surface within the project site for the presence of historic or prehistoric site indicators (Heller-Leib et al. 2022, page 21).

Historic Architectural Survey

The historic architectural survey was conducted by staff of PaleoWest on November 23, 2021, inclusive of the project site and along the routes of all linear facilities. The project area was surveyed again on August 23, 2022, during which PaleoWest assessed the current condition of two historic period structures: 2001 Fortune Drive and 1700 Montague Expressway. The properties—including buildings, structures, site features, and contextual views—were documented with digital photographs (Heller-Leib et al. 2022, page 21). Additionally, PaleoWest completed NRHP/CRHR and City of San José Landmark evaluations.

Typically, to assess the historical significance of a cultural resource, "sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource" (Heller-Leib et al. 2022, page 23). However, the NRHP Criteria for Evaluation also considers properties that have achieved significance within the past 50 years if they are of exceptional importance under Criteria Consideration G. Similarly, resources less than 50 years may be considered for listing in the CRHR if it is demonstrated that sufficient time has passed to understand its historical importance (Heller-Leib et al. 2022, page 23).

Most buildings within the project area are less than 50 years in age. Please refer to **Figure 4.5-1** for a depiction of buildings/parcels surveyed within the built environment PAA and their dates of construction.

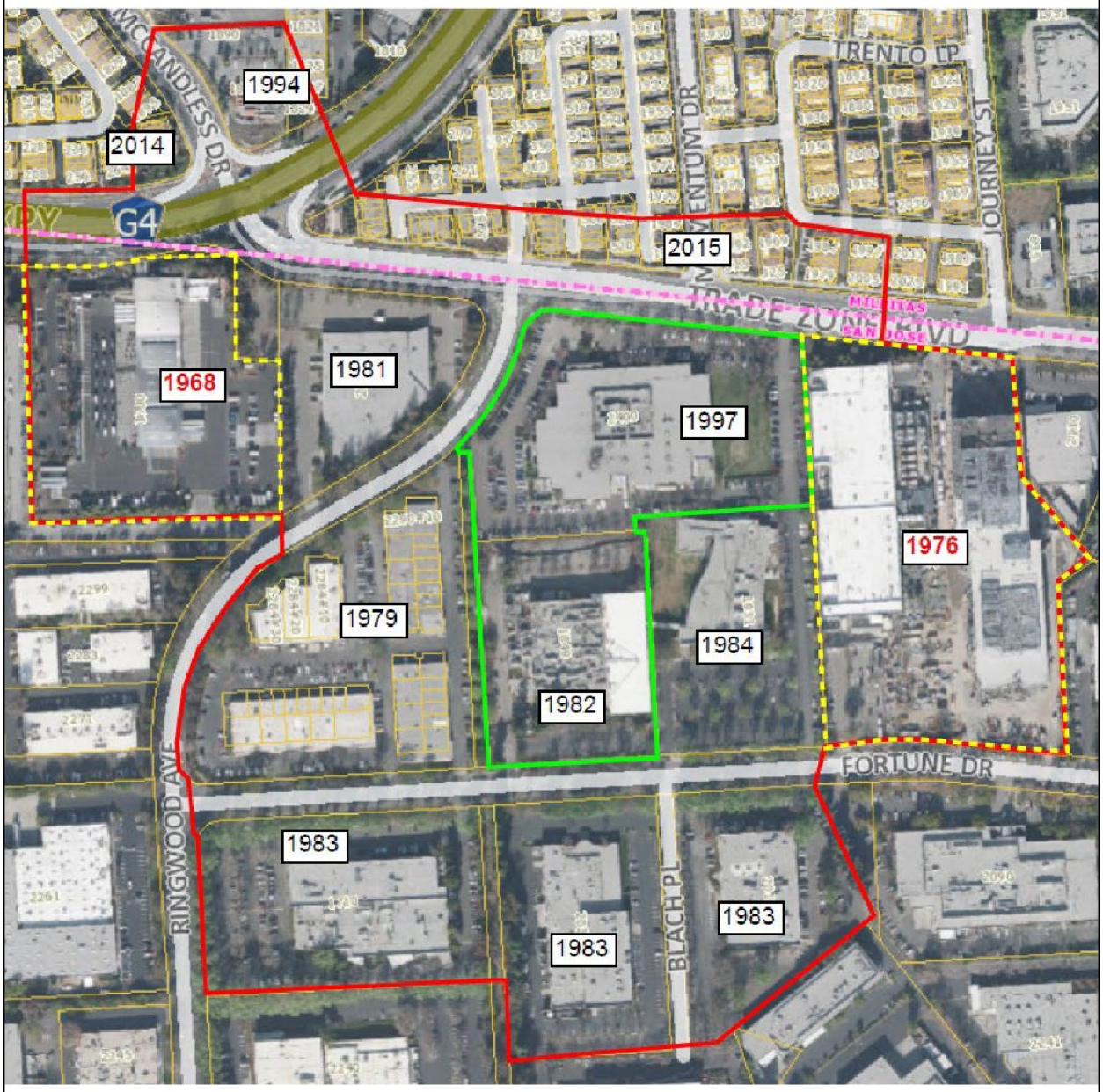

Figure 4.5-1
Dates of Construction for
Project Area Buildings/Parcels

Source: DayZenLLC 2022t

Results

Literature Review

The NWIC records search indicates that 82 previous cultural resources studies occurred within 0.25 miles of the project site. Of these, 31 cover all or part of the PAA. (Heller-Leib et al. 2022, Appendix A: Table A–1). The NWIC does not have any formally recorded resources documented within the project site or surrounding 0.25-mile buffer (**Tables 4.5-1** and **4.5-2**). The NWIC does, however, have record of two informally recorded resources within the 0.25-mile buffer and PAA (Heller-Leib et al. 2022, page 17). No built environment resources were previously recorded within the 0.25-mile buffer or PAA (Heller-Leib et al. 2022, page 17).

TABLE 4.5-1 INFORMALLY RECORDED RESOURCES WITHIN 0.25 MILE BUFFER OF PROJECT SITE

No.	Temporary Number	Resource Description	Age	Type
1.	C-168	Minimal number of artifacts. Site had been destroyed by modern development	Prehistoric	Site

TABLE 4.5-2 INFORMALLY RECORDED RESOURCES WITHIN PROJECT SITE

No.	Temporary Number	Resource Description	Age	Type
1.	C-1414	Secondary deposit of midden	Prehistoric	Site

Tribal Consultation

Applicant's Correspondence. The applicant's December 29, 2021, search of the Sacred Lands File returned negative results, indicating that the NAHC does not have record of Native American cultural resources in the search area (Heller-Leib et al. 2022, page 20). PaleoWest did not conduct tribal outreach (Heller-Leib et al. 2022, page 21).

The CEC's Consultation. The NAHC's April 25, 2022, search of the Sacred Lands File returned negative results, indicating that the NAHC does not have record of Native American cultural resources in the search area. Staff sent out letters with a brief description of the proposed project and invited consultation to the nine California Native American tribes listed by the NAHC on May 11, 2022 (CEC 2022c). Staff has not received any responses to its consultation letters.

Archaeological Surveys

The archaeological surveys did not identify archaeological or ethnographic resources in the surveyed area (DayZenLLC 2022a, page 4; Heller-Leib et al. 2022, pages 21–23).

Historic Architectural Survey

Two 45+ year-old properties were identified within the PAA: 2001 Fortune Drive and 1700 Montague Expressway were identified during the field survey conducted on August 23, 2022. Research did not reveal any historically significant events or individuals associated with these buildings, nor are the buildings unique or significant for their architecture,

aesthetics, or engineering. Furthermore, none of the buildings have yielded, or have the potential to yield information of exceptional importance. As such, none of the buildings within the project area that are less than 50 years in age show potential for exceptional historical importance and are therefore not historical resources for the purpose of CEQA. These two buildings were evaluated as follows.

2001 Fortune Drive. The property at 2001 Fortune Drive contains two buildings. Original Building 1 and Building 2 encompass approximately 9 acres of the 375-acre business park. The original Building 1 was built for a combination of light manufacturing, research, and office spaces. Building 2 was constructed as a warehouse and showroom (The Peninsula Times Tribune 1975, cited in Heller-Leib et al. 2022, page 28). Each building was initially constructed to hold multiple tenants. The original Building 1 was demolished in August 2020 to make way for a new four-story data center building currently owned by Stack Infrastructure. Building 2 is just west of Building 1 across a concrete driveway. This building dates to the original period of construction (1976) and consists of a single-story commercial storage building clad in a white composite material, with a flat roof, no visible windows, and a lack of ornamentation. After survey and evaluation it was recommended that 2001 Fortune Drive is not eligible for listing in the NRHP, CRHR, or as a City of San José City Landmark (Heller-Leib et al. 2022, pages 28–32). Staff therefore concludes that 2001 Fortune Drive does not meet the criteria for a historical resource according to CEQA.

1700 Montague Expressway. The property at 1700 Montague Expressway consists of a single-story warehouse and office building on a rectangular plan. The building features a low sloped north-south facing gable roof with two raised gable roof extensions with clerestory windows in the non-gabled ends to allow for light and filtration. The primary entrance is on the west elevation off Montague Expressway. A single glass and aluminum entry door flanked by two fixed windows is in a recessed entry on the west elevation. A small, flat roof single story addition is attached to the building just north of the entrance. The flat roof addition features a series of single and paired aluminum and glass windows and is clad in tan stucco. The office portion of the building extends further back behind a large security wall and vehicle gate. The office portion features a gable roof with clerestory windows in the non-gabled ends and is clad in tan stucco. Both the east and west elevations feature a series of elevated vehicle loading bays that extend from north to south along the building. The south elevation likewise features a series of five elevated vehicle loading bays. Except for the front addition and office, the entire building is clad in tan panelized aluminum siding. The lot of the property is almost entirely surfaced in blacktop, with rows of parking spaces for 18-wheeler trailers and delivery trucks. (Heller-Leib et al. 2022, page 32).

The San José Planning and Development Assessor Map tool indicates a construction date of 1968, though aerial imagery shows an actual construction date closer to 1956 for the original portion of the building. Unfortunately, the original building permit for the circa 1956 office portion of the building was not identified during archival research. Aerial photography suggests that the building has retained its use as a freight and shipping location since its construction. Following survey and evaluation it was recommended that 1700 Montague Expressway is not eligible for listing in the NRHP, CRHR, or as a City of San José City Landmark (Heller-Leib et al. 2022, pages 32–36). Staff therefore concludes that 1700 Montague Expressway does not meet CEQA's criteria for a historical resource.

Archaeological Sensitivity

Researchers have identified the Santa Clara Valley as being sensitive for buried archaeological deposits due to regional periods of prolonged soil development followed by episodes of alluvial deposition, concluding that Late Holocene archaeological sites may be buried under as little as 3 feet of sediment and Early and Middle Holocene sites can be buried under as much as 19 feet of alluvium (Rosenthal and Duvall 2008, page 26). The NWIC records search documents three archaeological monitoring or test-excavation reports in or near the PAA. Of these, one report identified buried historic archaeological resources just below fill soils, although a specific depth was not indicated (Gross 2017, Appendix B). In general, the PAA is near Coyote Creek and Guadalupe River and was subject to periodic flooding and sediment deposition. Archaeologists working independently of the present analysis have identified the PAA as being in a sensitive area for buried, prehistoric, archaeological resources (Heller-Leib et al. 2022, page 20). Historically, the PAA was used as rural agricultural land with no indication of the PAA once having historic buildings or structures. Therefore, the potential for buried historic archaeological resources is low (Heller-Leib et al. 2022, page 19).

Regulatory Background

Federal

No federal regulations related to cultural and cultural resources apply to the project.

State

California Environmental Quality Act. Various laws apply to the evaluation and treatment of cultural resources. CEQA requires lead agencies to evaluate cultural resources by determining whether they meet several sets of specified criteria that make such resources eligible to the CRHR. Those cultural resources eligible to the CRHR are historical resources. The evaluation then influences the analysis of potential impacts to such historical resources and the mitigation that may be required to reduce any such impacts.

CEQA and the CEQA Guidelines define significant cultural resources under two regulatory definitions: historical resources and unique archaeological resources. A historical resource is defined as a "resource listed in, or determined to be eligible by the State Historical

Resources Commission, for listing in the California Register of Historical Resources", or "a resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code," or "any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the agency's determination is supported by substantial evidence in light of the whole record." (Cal. Code Regs., tit. 14, § 15064.5[a]). Historical resources that are automatically listed in the CRHR include California historical resources listed in or formally determined eligible for the NRHP and California Registered Historical Landmarks from No. 770 onward (Pub. Resources Code, § 5024.1(d)).

Under CEQA, a resource is generally considered historically significant if it meets the criteria for listing in the CRHR. In addition to being at least 50 years old, a resource must meet one or more of the following four criteria (Pub. Resources Code, § 5024.1):

- Criterion 1, is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Criterion 2, is associated with the lives of persons important in our past;
- Criterion 3, embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Criterion 4, has yielded, or may be likely to yield, information important in prehistory or history.

In addition, historical resources must also possess integrity of location, design, setting, materials, workmanship, feeling, and association (Cal. Code Regs., tit. 14, § 4852(c)).

Even if a resource is not listed or determined to be eligible for listing in the CRHR, CEQA requires the lead agency to make a determination as to whether the resource is a historical resource as defined in Public Resources Code, sections 5020.1(j) or 5024.1.

In addition to historical resources, archaeological artifacts, objects, or sites can meet CEQA's definition of a unique archaeological resource, even if the resource does not qualify as a historical resource (Cal. Code Regs., tit. 14, § 15064.5(c)(3)). Archaeological artifacts, objects, or sites are considered unique archaeological resources if it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that the resource meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.

3. Is directly associated with a scientifically recognized important prehistoric or historic event or person. (Pub. Resources Code, § 21083.2[g]).

To determine whether a proposed project may have a significant effect on the environment, staff analyzes the project's potential to cause a substantial adverse change in the significance of historical or unique archaeological resources. The magnitude of an impact depends on:

- the affected historical resource(s);
- the specific historic significances of any potentially impacted historical resource(s);
- how the historical resource(s) significance is manifested physically and perceptually;
- appraisals of those aspects of any historical resource's integrity that figure importantly in the manifestation of the resource's historical significance; and
- how much the impact will change historical resource integrity appraisals.

Title 14, California Code of Regulations, section 15064.5(b) defines a "substantial adverse change" as the "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired."

California Native American Tribes, Lead Agency Tribal Consultation Responsibilities, and Tribal Cultural Resources

CEQA provides definitions for California Native American tribes, lead agency responsibilities to consult with California Native American tribes, and tribal cultural resources. A "California Native American tribe" is a "Native American tribe located in California that is on the contact list maintained by the Native American Heritage Commission (NAHC) for the purposes of Chapter 905 of the Statutes of 2004" (Pub. Resources Code, § 21073). Lead agencies implementing CEQA are responsible for consultation with California Native American tribes about tribal cultural resources within specific timeframes, observant of tribal confidentiality, and if tribal cultural resources could be impacted by a CEQA project, are to exhaust the consultation to points of agreement or termination.

Tribal cultural resources are either of the following:

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
   a. Included or determined to be eligible for inclusion in the CRHR.
   b. Included in a local register of historical resources as defined in the Public Resources Code, section 5020.1(k).
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in the Public Resources Code, section 5024.1(c). In applying these criteria, the lead agency shall

consider the significance of the resource to a California Native American tribe. (Pub. Resources Code, § 21074[(a]).

A cultural landscape that meets the criteria of Public Resources Code, section 21074(a), is a tribal cultural resource to the extent that the landscape is geographically defined in terms of its size and scope (Pub. Resources Code, § 21074(b)). Historical resources, unique archaeological resources, and non-unique archaeological resources, as defined at Public Resources Code, sections 21084.1, 21083.2(g), and 21083.2(h), may also be tribal cultural resources if they conform to the criteria of Public Resources Code, section 21074(a).

CEQA also states that a project with an impact that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment (Pub. Resources Code, § 21084.2).

Local

City of San José General Plan. Historical and cultural resources are addressed in LU-13 thru LU-16 in Historic Preservation Chapter 6: Land Use and Transportation of the *Envision San José 2040 General Plan*. The primary General Plan goal is to preserve historically and archaeologically significant structures, sites, districts, and artifacts to promote a greater sense of historical awareness and community identity, contribute to a sense of place, raise public awareness, encourage sustainable practices through preservation and enhance the quality of urban living (San José 2022a).

City of San José Municipal Code. As a Certified Local Government, the City of San José has the authority from the Office of Historic Preservation to develop and maintain its own historic preservation program (Title 13, Chapter 13.48, Historic Preservation, Sections 13.48.010 through 13.48.660). According to the City's Historic Preservation Ordinance (Municipal Code Chapter 13.48), the City of San José is authorized to maintain an inventory of historical resources, establish a historical landmarks commission, preserve historical properties using landmark designation process, require historical preservation permits for additions or alterations to City Landmarks or buildings within City Historic Districts, and to provide financial incentives through the Historic Property Contracts program (San José 2022b).

The City of San José maintains a register of City Landmarks, Historic Districts, and Structures of Merit. The City of San José's Historic Preservation Ordinance defines a resource as a City Landmark if it falls into one of the following four categories of structure:

1. An individual structure or portion thereof
2. An integrated group of structures on a single lot
3. A site, or portion thereof
4. Any combination thereof (San José 2022b, Sec. 13.48.020.C)

The landmark designation process itself requires that findings be made that proposed landmarks have special "historical, architectural, cultural, aesthetic, or engineering interest or value of an historical nature", and that designation as a landmark conforms to the goals and polices of the General Plan. The following eight factors can be considered to make those findings among other relevant factors:

1. Its character, interest or value as a part of the local, regional, state or national history, heritage, or culture
2. Its location as a site of a significant historical event
3. Its identification with a person or persons who significantly contributed to the local, regional, state or national culture and history
4. Its exemplification of the cultural, economic, social, or historical heritage of the City of San José
5. Its portrayal of the environment of a group of people in an era of history characterized by a distinctive architectural style
6. Its embodiment of distinguishing characteristics of an architectural type or specimen
7. Its identification as the work of an architect or master builder whose individual work has influenced the development of the City of San José
8. Its embodiment of elements of architectural or engineering design, detail, materials, or craftsmanship which represents a significant architectural innovation or which is unique (San José 2022b, Sec. 13.48.110 H).

San José Historic Landmark Nomination Form. Evaluation of potential City Landmarks is conducted based on both the subjective criteria listed in the Historic Preservation Ordinance and on a numerical tally system that scores structures based on visual quality or design; history and association; environment and context; integrity; reversibility; interior quality and conditions; and NRHP/CRHR status. A points-based scoring system is used; scores over 33 suggest that the building should be evaluated for City Landmark status or the CRHR (San José 2022c).

4.5.2 Environmental Impacts

Cultural Resources CEQA Checklist Questions

a. Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

Construction

Less Than Significant with Mitigation Incorporated. No historic built environment resources meeting CEQA's criteria for historical resources are in the PAA. No archaeological or ethnographic resources meeting CEQA's criteria for historical resources occupy the surface of the PAA. Previous research and archaeological monitoring in the

project vicinity, however, indicate that the PAA could harbor buried archaeological or ethnographic resources. The PAA is close to Coyote Creek and the Guadalupe River and was subject to periodic flooding and sediment deposition, which could have buried archaeological or ethnographic resources. Archaeologists working independently of the present analysis have indicated the PAA is in a sensitive area for buried, prehistoric, archaeological resources (Heller-Leib et al. 2022, page 20).

The ground disturbance required to construct the proposed project, specifically trenching for utilities, drainage facilities, and electrical connection, would extend into native soils 6 feet 8 inches below grade or deeper. Shallower excavations would have a much lower potential to encounter buried resources as the PAA is within an already built environment. Known buried archaeological sites in Santa Clara Valley are located at depths of up to 19 feet (Rosenthal and Duvall 2008, page 26). If such resources were to be damaged during construction, it would be considered a significant impact, particularly since virtually all archaeological sites 5,000 years or older occur only in buried contexts.

The applicant proposed measures to reduce potential impacts to buried, as-yet-undiscovered historical resources. Staff evaluated these measures in the context of the potential impacts and concludes that additional measures will be required to reduce impacts. The applicant proposed measures include protocols for treatment of discoveries, and reporting. However, there are no provisions for worker environmental awareness training or the participation of archaeological monitors or cultural monitors from California Native American tribes, except for cases of human remains discoveries. Since California Native American archaeological resources are the sort of cultural resource that ground disturbance could encounter in the archaeological PAA, tribal cultural monitors should be involved.

The CEC staff proposes mitigation measures requiring worker awareness program and use of qualified archaeologists and Native American monitors (**CUL-1**), procedures for the event that prehistoric or historic resources are encountered during excavation or grading of the site (**CUL-2**), and procedures for the event that human remains are discovered (**CUL-3**) to reduce impacts to buried historical resources. Staff concludes that with implementation of mitigation measures **CUL-1** through **CUL-3** impacts to buried historical resources would be reduced to a less than significant level.

Operation

No Impact. Ground-disturbing activities are not part of the operational or maintenance profile of the proposed project. Impacts on historical resources are therefore not expectable during operation and maintenance.

b. Would the project cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5?

Construction

Less Than Significant with Mitigation Incorporated. See the response to CEQA checklist criterion "a" above, which includes a discussion of historic, archaeological, and ethnographic resources. Implementation of mitigation measures **CUL-1** through **CUL- 3** would reduce impacts on buried, unique archaeological resources to a less than significant level.

Operation

No Impact. Ground-disturbing activities are not part of the operational or maintenance profile of the proposed project. Impacts on unique archaeological resources are therefore not expectable during operation and maintenance.

c. Would the project disturb any human remains, including those interred outside of formal cemeteries?

Construction

Less Than Significant with Mitigation Incorporated. See the response to CEQA checklist criterion "a" above, which includes a discussion of historic, archaeological, and ethnographic resources (all of which could include human remains). Mitigation measures **CUL-1** through **CUL-3** would reduce impacts on buried human remains to a less than significant level.

Operation

No Impact. Ground-disturbing activities are not part of the operational profile of the proposed project. Impacts on human remains are therefore not expectable during operation and maintenance.

Tribal Cultural Resources CEQA Checklist Questions

d. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, *and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of*

historical resources as defined in Public Resources Code section 5020.1(k)?

Construction

No Impact. There are no tribal cultural resources listed or eligible for listing in the CRHR or other state registers, NRHP, or local register of historical resources in the PAA. Therefore, no impacts would occur during construction.

Operation

No Impact. Ground-disturbing activities are not part of the operational profile of the proposed project. Impacts on tribal cultural resources listed or eligible for listing in the CRHR or other state registers, NRHP, or local register of historical resources would therefore not occur during operation or maintenance.

e. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, *and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.* **In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?**

Construction

Less Than Significant with Mitigation Incorporated. Although there are no known tribal cultural resources on or directly adjacent to the proposed site, ground disturbance associated with the proposed project could result in the exposure and destruction of buried, as-yet unknown prehistoric archaeological resources that could qualify as tribal cultural resources. If these resources were to be exposed or destroyed, it would be a significant impact. Implementation of mitigation measures **CUL-1** through **CUL-3** would reduce impacts on buried, tribal cultural resources to a less than significant level.

Operation and Maintenance

No Impact. Ground-disturbing activities are not part of the operational profile of the proposed project. Impacts on tribal cultural resources listed or eligible for listing in the CRHR or other state registers, NRHP, or local register of historical resources are therefore not expectable during operation and maintenance.

4.5.3 Mitigation Measures

CUL-1: Prior to the commencement of construction, the applicant will secure the services of qualified archaeological specialists and Native American monitors. These specialists and monitors will prepare a workforce environmental awareness program (WEAP) to instruct construction workers of the obligation to protect and preserve valuable archaeological and Native American resources for review and approval by the Director or Director's designee of the City of San José Department of Planning, Building and Code Enforcement (PBCE). This program will be provided to all construction workers via a recorded presentation and will include a discussion of applicable laws and penalties under the laws; samples or visual aids of resources that could be encountered in the project vicinity; instructions regarding the need to halt work in the vicinity of any potential archaeological and Native American resources encountered; and measures to notify their supervisor, the applicant, and the specialists. Submit the qualifications of archaeological specialists and Native American monitors, as well as an electronic copy of the WEAP to the Director or Director's designee of the City of San José PBCE for review and approval.

The applicant will secure the services of a Native American monitor and archaeologist to observe excavations of native soil. 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 of 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.

CUL-2: If archaeological resources are encountered during excavation or grading of the site, all activity within a 50-foot radius of the find shall be stopped, the Director or Director's designee of the City of San José Department of Planning, Building and Code Enforcement (PBCE) shall be notified, and a qualified archaeologist will examine the find. The archaeologist will evaluate the find to determine if they meet the definition of a historical, unique archaeological, or tribal cultural resource and make appropriate recommendations regarding the disposition of such finds prior to issuance of building permits for any construction occurring within the above-referenced 50-foot radius. If the finds do not meet the definition of a historical, unique archaeological, or tribal cultural resource, no further study or protection is necessary prior to project implementation. If the find does meet the definition of a historical, unique archaeological, or tribal cultural resource, then it will be avoided by project activities. If avoidance is not feasible, adverse effects to such resources will be mitigated in accordance with the recommendations of the archaeologist. Recommendations will include collection, recordation, and analysis of any significant cultural materials. A report of findings documenting any data recovery shall be submitted to the Director or Director's designee of the City of San José Department of PBCE, NAHC (tribal cultural resources), and the Northwest Information Center.

The project applicant will ensure that construction personnel do not collect or move any cultural material and will ensure that any fill soils that may be used for construction purposes does not contain any archaeological materials.

CUL-3: If human remains are discovered during excavation or grading of the site, all activity within a 50-foot radius of the find will be stopped. The Santa Clara County Coroner shall be notified immediately and will 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 shall notify the Native American Heritage Commission (NAHC) within 24 hours of the identification. Once the NAHC identifies the most likely descendant(s) (MLD), the descendant(s) will make recommendations regarding proper burial (including the treatment of grave goods), which will be implemented in accordance with section 15064.5(e) of the California Code of Regulations, Title 14. The archaeologist will recover scientifically valuable information, as appropriate and in accordance with the recommendations of the MLD. A report of findings documenting any data recovery shall be submitted to the Director or Director's designee of the City of San José Department of Planning, Building and Code Enforcement (PBCE) and the Northwest Information Center.

4.5.4 References

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4.6 Energy and Energy Resources

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the project specific to energy and energy resources[1].

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

Environmental checklist established by CEQA Guidelines, Appendix G.

4.6.1 Environmental Setting

The project would consist of two one-story data center buildings, a four-story advanced manufacturing building (AMB), utility substation, generator equipment yard, parking garage and landscaping, recycled water pipeline, and a total of 39 diesel-fired emergency backup generators (gensets). Thirty-six 3-megawatt (MW) gensets (of which six gensets would be redundant) would be used to provide backup power to support an uninterruptible power supply exclusively for the project (DayZenLLC 2021a, Section 2.1). The remaining three gensets (life safety gensets), 1-MW each, would support house functions primarily for critical cooling equipment, other general building (administration), and life safety services. The gensets, ensuring a reliability factor of 99.999 percent, would serve the data center and AMB only during emergency outages when electric service provided by San José Clean Energy (SJCE) via Pacific Gas and Electric Company (PG&E) transmission lines is interrupted. The gensets would be electrically isolated from the PG&E electrical transmission grid with no means to deliver electricity offsite.

The 36 gensets would each be a Caterpillar Model 3516E (Tier 4 compliant) with a peak rated output capacity of 3 MW and fuel consumption rate of 208.2 gallons per hour (gal/hr) at full. The three house gensets would each be a Caterpillar Model C32 (Tier 4 compliant) with a peak rated output capacity of 1 MW and fuel consumption rate of 71.5 gallons per hour (gal/hr) at full load (DayZenLLC 2021d, Appendix A). Staff has verified the output capacity and rate of fuel consumption of these house gensets from their product sheets (Caterpillar 2022). The maximum electrical load requirement of the data center would be 91 MW, which includes the electrical power load of the Information Technology (IT) servers, the cooling load of the data center buildings, as well as the

1 This section includes staff's analysis of the project's potential impact on Energy Resources, as required by Public Resources Code section 25541 when considering a Small Power Plant Exemption

facility's ancillary loads. See **Section 3 Project Description** for further information. For the purposes of testing and maintenance, only one genset would run at a time.

Regulatory Background

Federal

Energy Star and Fuel Efficiency. At the federal level, energy standards set by the United States Environmental Protection Agency (EPA) apply to numerous consumer products and appliances. The EPA also sets fuel efficiency standards for automobiles and other modes of transportation.

State

Title 24, California Energy Efficiency Standards for Residential and Nonresidential Buildings - Green Building Standards Code (2019). The California Green Building Standards Code (Cal. Code Regs., tit. 24, pt. 11) applies to the planning, design, operation, construction, use, and occupancy of newly constructed buildings and requires the installation of energy- and water-efficient indoor infrastructure.

Senate Bill 100 - The 100 Percent Clean Energy Act of 2018. Senate Bill (SB) 100 (Chapter 312, Statutes of 2018) required the Public Utilities Commission (CPUC) to include as part of the Renewables Portfolio Standard Program (RPS) (Pub. Util. Code, § 399.11 et seq.) the requirements that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt-hours of those products sold to their retail end-use customers achieve 44 percent of retail sales by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030. This requirement applies to SJCE, which would be the primary source of energy supply for the project. The bill also required the Public Utilities Commission, California Energy Commission, and State Air Resources Board to utilize programs authorized under existing statutes to meet the state policy goal of 100 percent of total retail sales of electricity in California provided by eligible renewable energy resources and zero-carbon resources by December 31, 2045.

California Public Utilities Commission - Emergency Load Reduction Program. The Emergency Load Reduction Program (ELRP), established in 2021, is a five-year pilot program created as a new load-shedding or resource adequacy demand response approach to help avoid rotating outages during peak summer electricity demand. ELRP is designed to pay electricity consumers for reducing energy consumption or increasing electricity supply during periods of electrical grid emergencies. ELRP is managed by the three large investor-owned utilities, which includes PG&E. Voluntary participants are called upon, and paid, only as a last resort during an emergency grid situation issued by the California Independent System Operator. When the ELRP is triggered, enrolled customers may choose not to participate. There is no penalty for non-participation, and there is not a requirement to reduce load by a particular amount during the event. However, ELRP payment is calculated based on the load reduction measured on the customer's meter.

Local

City of San José General Plan. *Envision San José 2040 General Plan* (General Plan) was adopted by the City Council in November 2011, and most recently amended June 7, 2022. The city's progress towards achieving key goals is evaluated every four years. Applicable *Envision San José 2040 General Plan* Policies and Actions regarding energy are detailed in Chapter 3 – Environmental Leadership guidelines of this general plan and are summarized below:

- MS-2.1: Develop and maintain policies, zoning regulations, and guidelines that require energy conservation and use of renewable energy sources.
- MS-2.2: Encourage maximized use of on-site generation of renewable energy for all new and existing buildings.
- MS-2.3: Utilize solar orientation (i.e., building placement), landscaping, design, and construction techniques for new construction to minimize energy consumption.
- MS-2.4: Promote energy-efficient construction practices.
- MS-2.6: Promote roofing design and surface treatments that reduce the heat island effect of new and existing development and support reduced energy use, reduced air pollution, and a healthy urban forest. Connect businesses and residents with cool roof rebate programs through the city's outreach efforts.
- MS-2.7: Encourage the installation of solar panels or other clean energy power generation sources over parking areas.

City of San José Municipal Code. San José Municipal Code section 9.10.2480 mandates a 75 percent diversion of waste generated on site for Cal Green projects. This is applicable to:

- The construction of a newly permitted structure
- Tenant improvement projects valued at $200,000 or greater

The project would be required to comply with applicable provisions in the city's General Plan and zoning ordinance, as verified by the city's design review process.

4.6.2 Environmental Impacts

a. Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Construction

Less Than Significant Impact. Construction activities would consume nonrenewable energy resources, primarily fossil fuels (oil, gasoline, and diesel), for construction equipment and vehicles. It is anticipated that these nonrenewable energy resources would be used efficiently during construction activities and would not result in long-term

significant depletion of these energy resources or permanently increase the project's reliance on them.

Under mitigation measure **AQ-1**, the project would implement measures to minimize the idling of construction equipment and would require all such equipment to be maintained and properly tuned (see **Section 4.3 Air Quality**). This would ensure that fuel consumed during construction would not be wasted through unnecessary idling or the operation of poorly maintained equipment, and not add to unnecessary air emissions. Additionally, the project would implement construction waste management methods during demolition and construction to reduce the amount of construction waste and in compliance with the city's Construction & Demolition Diversion Program (San José Mun. Code, § 9.10.2480) by recycling or diverting at least 75 percent of materials generated for discards by the project. This would reduce the amount of demolition and construction waste going to the landfill. Diversion saves energy by reusing and recycling materials for other uses (instead of landfilling materials and using additional non-renewable resources).

Therefore, the construction phase of the project would create a less than significant impact on local and regional energy supplies and a less-than-significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources.

Operation

Less Than Significant Impact. The total number of hours of operation for reliability purposes (i.e., readiness testing and maintenance) for the gensets would be limited by the data center to no more than 50 hours per genset annually (DayZenLLC 2021a, Section 4.6.2.1). The primary fuel for the gensets would be renewable diesel, with ultra-low sulfur diesel (USLD or conventional) as backup fuel. Renewable diesel is a direct replacement alternative to conventional diesel fuel for the project's gensets. It is not a fossil fuel and is made of nonpetroleum renewable resources (vegetable oil or other biomass feedstock such as wood, agricultural waste, garbage, etc.). Renewable diesel is produced through various thermochemical processes, such as hydrotreating, gasification, and pyrolysis. Renewable diesel is not the same as biodiesel and has different fuel properties than renewable diesel. Biodiesel is produced through transesterification, which is a chemical process that converts fats and oils into fatty acid methyl esters. (See **Section 5 Alternatives** for further discussion).

The total quantities of renewable diesel or USLD diesel fuel used for all the gensets operating at full load would be approximately 9,178 barrels per year (bbl/yr).[2] California has a renewable diesel and USLD fuel supply of approximately 6,300,000 bbl/yr[3] and

2 Calculated as: (208.2 gal/hr x 50 hours per year x 36 generators + 71.5 gal/hr x 50 hours per year x 3 generators) = 385,485 gallons per year = 9,178 bbl/yr.

3 This is the annual production of 265,000,000 gallons obtained from the U.S. Energy Information Administration's U.S. Renewable Diesel Fuel and Other Biofuels Plant Production Capacity

310,000,000 bbl/yr[4], respectively. The project's use of fuel would constitute a small fraction of the renewable diesel and USLD's available resources (less than 0.14 and 0.003 percent, respectively)—the supply is more than sufficient to meet the project's necessary demand. Moreover, the current supply of renewable diesel does not account for more refineries that are coming online and any import supply—future and import supply would bolster renewable diesel's available resource.

Since the project would use renewable diesel, with ULSD as backup supply, the project's use of fuel on energy resources would be less than significant.

It is important to note that maintenance and readiness testing of the gensets is crucial to the project's viability. The most important data center criterion is operational reliability. Crucial public services, such as the 911 emergency service, Offices of Emergency Management, and utilities infrastructure, are increasingly using data centers for their operation. The reliability and data security requirements of a data center would be compromised by limiting or reducing fuel consumption for maintenance and readiness testing. This includes both the primary and redundant gensets. Even though the redundant gensets are purposed to provide backup service to the primary gensets, their operational reliability is equally important, and they are designed to start up at the same time as the primary gensets during emergency operations. However, during an emergency outage the primary gensets could operate at 100 percent capacity (DayZenLLC 2021a, Section 2.2.4.1). If any of the primary gensets fails to operate, a redundant genset must be immediately ready to run to take up the lost load. So, it is crucial that the redundant gensets be regularly tested and maintained according to the same testing and maintenance requirements as the primary ones and as prescribed by the manufacturer's warranty conditions. Therefore, the use of diesel fuel, specifically the use of renewable diesel fuel, for the gensets for readiness testing and maintenance would not be wasteful, inefficient, or unnecessary.

The gensets would use renewable diesel and lubricating oils. However, the use of the gensets for emergency purposes would be limited to times when there is an interruption of SJCE's electric service or other rare emergency that would require the facility to switch to the gensets for backup power generation. Under emergency conditions, defined as the loss of electrical power to the data center and which are infrequent and short-duration events, the gensets would operate and consume renewable diesel fuel, as necessary, to maintain data center operations. Data centers, such as STACK, could voluntarily participate in the CPUC's ELRP, in which case, they would disconnect from the grid and use their on-site gensets to supply their own electricity in the event of an energy shortage

4 This is the sum of the annual production of 108,657,000 bbl and available stocks of 202,075,000 bbl obtained from the Energy Commission's Weekly Fuels Watch Report for 2022 (latest annual report available).

emergency. However, the project has stated that the gensets would not be operated as part of load-shedding or resource adequacy demand response[5].

The Caterpillar generator models selected for this project have an efficiency rating comparable to other Tier 4 commercially available diesel-fueled generators of similar generating capacity.

Power Usage Effectiveness (PUE) is a metric used to compare the energy efficiency of facilities that house computer servers. It is a common metric for determining how effectively a data center's infrastructure systems can deliver power to the computer systems it houses. PUE was published in 2016 as a global standard under the International Organization for Standardization, the International Electrotechnical Commission, as well as the European Standards (ISO 20160, European Standards 2016). It is defined as the ratio of total facility energy draw (including the facility's mechanical and electrical loads) to IT server electrical power draw (PUE = total facility source energy [including the IT source energy]/IT source energy). This approach to calculating a data center's energy efficiency is similar to the American Society of Heating, Refrigerating, and Air-conditioning Engineers (ASHRAE) Energy Standard for Data Centers (ASHRAE 90.4). However, there is a notable difference: ASHRAE 90.4, which intends to tackle and regulate poorer performers, calculates energy efficiency by providing an alternative path that allows tradeoffs between mechanical and electrical loads particularly within existing, older data centers while the PUE is a more appropriate path to determining a new data center's energy efficiency.

A PUE of 2 means that the data center must draw two watts of electricity for each watt of power consumed by the IT server equipment. While the PUE is always greater than 1, the closer it is to 1 the greater the portion of the power drawn by the facility that goes to the IT server equipment.

The PUE has been used as a guideline for assessing and comparing energy and power efficiencies associated with data centers since 2007, but not until 2016 was it published as a standard (ASHRAE 2016). It must be noted that the PUE metric was designed to compare facilities of similar size and within similar climatic conditions. PUE factors started around 2.0, but values have since been migrating down to 1.25 or lower, demonstrating a significant improvement in efficient energy usage over the years. A facility with a PUE of 1.5-2.0 is considered "efficient" while one with a PUE of 1.2-1.5 is considered "very efficient."

The peak PUE for the project would be 1.5, and its annual average PUE would be 1.3 (DayZenLLC 2021a, Section 2.2.3.2). The project's peak operation PUE estimate is based

5 Resource adequacy demand response for a data center is when a data center disconnects from the electric grid when electric resources are challenged to reduce the electricity demand on the power grid and instead operate the data center using the backup generators.

on design assumptions and represents worst case: that is, the hottest day with all server bays occupied and all servers operating at 100 percent capacity.

Additionally, rack power rating is an indicator of the server rack's power density. The lower the value the higher the power density and the more information it processes per unit of electricity consumed, resulting in a more efficient use of energy. The project would have an average rack power rating of 8 kW (DayZenLLC 2021a, Section 2.3.1.2). This power rating is low, and it shows that the racks would use energy efficiently.

The project would be constructed in accordance with the 2022 California Green Building Standards Code and would include green building measures to reduce energy consumption. Examples of these measures include:

- Daylight penetration to offices;
- LED lighting fixtures;
- Reflective roof surfaces;
- Utilizing lighting control to reduce energy usage; and
- Air economization[6] integrated into the central air handling system for building cooling.

The project's consumption of energy resources during operation would not be wasteful, inefficient, or unnecessary. Project operation would have a less-than-significant adverse effect on local or regional energy supplies and energy resources.

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Construction

Less *Than Significant.* The project would participate in the city's Construction & Demolition Debris Recycling Program and implement measures to promote walking, bicycling, and transit use, thereby reducing motor vehicle use. Through the city's design review process, the project would be required to comply with the California Green Building Standards Code and the city's General Plan land use policies related to energy, which are consistent with the EPA's Energy Star and Fuel Efficiency program.

Operation

Less Than Significant. During operation, the project would use both nonrenewable energy resources and renewable energy resources in SJCE's portfolio of resources. SJCE is the electricity provider for residents and businesses in the city of San José. SJCE sources the electricity, and PG&E delivers it to customers over existing utility lines. SJCE offers three products for its customers: the Green Value, Green Source, and Total Green. The Green

6 An air economizer is a ducting arrangement, including dampers, linkages, and an automatic control system that allows a cooling supply fan system to supply outside air to reduce or eliminate the need for mechanical cooling.

Value consists of 40 percent renewable, 40 percent non-renewable carbon-free, and 20 percent unspecified sources. The Green Source consists of 60 percent renewable, 35 percent non-renewable carbon-free, and 5 percent unspecified sources. SJCE offers 100 percent renewable energy to its customers through Total Green (San José 2021). Customers are automatically enrolled in the Green Source program but can choose to enroll in the Total Green program at any time.

The applicant would purchase electricity from SJCE and/or implement other emissions reduction measures mutually agreeable to the city of San José. To ensure that the applicant's proposal is consistent with the "Renewable Energy Development" objectives of the city of San José's 2030 Greenhouse Gas Reduction Strategy (GHGRS), the project would need to either participate in SJCE at the Total Green level or negotiate an electricity contract with SJCE that accomplishes the same goals as the Total Green level. Therefore, staff proposes **GHG-3**, requiring the project owner to participate in the SJCE Total Green Program, or negotiate an electricity contract with SJCE that accomplishes the same goals as the Total Green level, to ensure compliance with the GHGRS. See **Section 4.8 Greenhouse Gas Emissions** for more information.

The project would receive electricity from SJCE sources, which are on track to meet the requirements of SB 100 as added to the RPS. SJCE has committed to meeting the RPS through its 100 percent renewable energy program, Total Green. SJCE is currently in compliance with the stated goals of SB 100 as added to the RPS and can accommodate the electricity demand from this project while continuing compliance with the SB 100 and RPS requirements.

Since the project's gensets would operate only during routine testing and maintenance, which is limited to 50 hours per genset annually and in the case of emergencies, and the generated electricity would only serve the project and not the wider electric grid, the project's possible use of ULSD fuel would not obstruct or inhibit the state from achieving its energy-related goals. Additionally, the use of renewable diesel fuel would reduce the project's reliance on conventional diesel and is a cleaner burning fuel. See **Sections 4.3 Air Quality and 4.8 Greenhouse Gas** for more discussion.

Through energy-efficient design and increased renewable electricity use from SJCE, its primary electricity source, the project would neither conflict with nor obstruct state or local plans for renewable energy or energy efficiency, and, therefore, would have no impact on those plans.

4.6.3 Mitigation Measures

None required.

4.6.4 References

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4.7 Geology and Soils

This section describes the environmental and regulatory setting and discusses impacts associated with the demolition, construction, and operation of the project with respect to geology and soils.

GEOLOGY AND SOILS Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv. Landslides?	☐	☐	☒	☐
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c. Be located on geologic units or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d. Be located on expansive soil, as defined in Section 1803.5.3 of the California Building Standards Code (2019 or most current adopted version), creating substantial direct or indirect risks to life or property?*	☐	☐	☒	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

*Geology and Soils question (d) should reflect and comply with the most current adopted California Building Standards Code (CBC) at the time of final project design.
Environmental checklist established by CEQA Guidelines, Appendix G.

4.7.1 Environmental Setting

An analysis of existing data included reviews of publicly available literature, maps, air photos, and documents presented with the application. An online database search was performed to identify previously reported paleontological resources near the project site. The geologic map review of the project area included maps published by the U.S. Geological Survey (Helley and Wesling 1989; Wesling and Helley 1989, and Helley et al. 1994). The literature reviewed included published and unpublished scientific papers. A paleontological record search of the University of California Museum of Paleontology, Berkeley, online paleontological database was conducted for the disturbed project areas, including a 10-mile buffer zone surrounding the proposed data center (UCMP 2021).

Paleontological Sensitivity

The potential for paleontological resources to occur in the project area was evaluated using the federal Potential Fossil Yield Classification (PFYC) system developed by the Bureau of Land Management (BLM 2016). Because of its demonstrated usefulness as a resource management tool, the PFYC has been utilized for many years for projects across the country, regardless of land ownership. It is a predictive resource management tool that classifies geologic units based on their likelihood to contain paleontological resources on a scale of 1 (very low potential) to 5 (very high potential) or Unknown. This system is intended to aid in predicting, assessing, and mitigating impacts to paleontological resources. The PFYC ranking system is summarized in **Table 4.7-1**.

TABLE 4.7-1: POTENTIAL FOSSIL YIELD CLASSIFICATION

BLM PFYC Designation	Assignment Criteria Guidelines and Management Summary
1 Very Low Potential	Geologic units are not likely to contain recognizable paleontological resources.
	Units are igneous or metamorphic, excluding air-fall and reworked volcanic ash units.
	Units are Precambrian in age.
	Management concern is usually negligible, and impact mitigation is unnecessary except in rare or isolated circumstances.
2 Low	Geologic units are not likely to contain paleontological resources.
	Field surveys have verified that significant paleontological resources are not present or are very rare.
	Units are generally younger than 10,000 years before present.
	Recent aeolian deposits.
	Sediments exhibit significant physical and chemical changes (i.e., diagenetic alteration) that make fossil preservation unlikely.
	Management concern is generally low, and impact mitigation is usually unnecessary except in occasional or isolated circumstances.
3 Moderate Potential	Sedimentary geologic units where fossil content varies in significance, abundance, and predictable occurrence.
	Marine in origin with sporadic known occurrences of paleontological resources.
	Paleontological resources may occur intermittently, but these occurrences are widely scattered.
	The potential for authorized land use to impact a significant paleontological resource is known to be low-to-moderate.

TABLE 4.7-1: POTENTIAL FOSSIL YIELD CLASSIFICATION

BLM PFYC Designation	Assignment Criteria Guidelines and Management Summary
	Management concerns are moderate. Management options could include record searches, pre-disturbance surveys, monitoring, mitigation, or avoidance. Opportunities may exist for hobby collecting. Surface-disturbing activities may require sufficient assessment to determine whether significant paleontological resources occur in the area of a proposed action and whether the action could affect the paleontological resources.
4 High Potential	Geologic units that are known to contain a high occurrence of paleontological resources.
	Significant paleontological resources have been documented but may vary in occurrence and predictability.
	Surface-disturbing activities may adversely affect paleontological resources.
	Rare or uncommon fossils, including invertebrate (such as soft body preservation) or unusual plant fossils, may be present.
	Illegal collecting activities may impact some areas.
	Management concern is moderate to high depending on the proposed action. A field survey by a qualified paleontologist is often needed to assess local conditions. On-site monitoring or spot checking may be necessary during land disturbing activities. Avoidance of known paleontological resources may be necessary.
5 Very High Potential	Highly fossiliferous geologic units that consistently and predictably produce significant paleontological resources.
	Significant paleontological resources have been documented and occur consistently.
	Paleontological resources are highly susceptible to adverse impacts from surface disturbing activities.
	Unit is frequently the focus of illegal collecting activities.
	Management concern is high to very high. A field survey by a qualified paleontologist is almost always needed and on-site monitoring may be necessary during land use activities. Avoidance or resource preservation through controlled access, designation of areas of avoidance, or special management designations should be considered.
U Unknown	Geologic units that cannot receive an informed PFYC assignment.
	Geological units may exhibit features or preservation conditions that suggest significant paleontological resources could be present, but little information about the actual paleontological resources of the unit or area is known.
	Geologic units represented on a map are based on lithologic character or basis of origin but have not been studied in detail.
	Scientific literature does not exist or does not reveal the nature of paleontological resources.
	Reports of paleontological resources are anecdotal or have not been verified.
	Area or geologic unit is poorly or under-studied.
	BLM staff has not yet been able to assess the nature of the geologic unit.
	Until a provisional assignment is made, geologic units with unknown potential have medium to high management concerns. Field surveys are normally necessary, especially prior to authorizing a ground-disturbing activity.

Source: Summarized and modified from BLM 2016

Regional Geologic Setting

The proposed project is situated in the Southern Coastal Ranges geomorphic province in the San Francisco Bay basin, in the Santa Clara Valley, and in the city of San José. The division between the Northern and Southern Coastal Ranges is one of convenience.

Both provinces contain many elongate ranges and narrow valleys that are approximately parallel to the coast, although the coast trends slightly northward more than the ridges and valleys, except at San Francisco Bay where a pronounced gap separates the two provinces (Norris and Webb 1990). The differences between the two provinces occur because the Northern Ranges lie east of the San Andreas Fault zone, whereas the Southern Ranges predominantly lie to the west (Norris and Webb 1990). The two ranges have dissimilar basement rocks. The Northern Range and portions of the Southern Range east of the San Andreas Fault zone are underlain by strongly deformed Franciscan subduction complex rocks. The areas west of the San Andreas Fault zone in both the Northern and Southern Ranges are underlain by a strongly deformed granitic-metamorphic complex known as the Salinian block. The basement rock beneath the project site, which lies east of the San Andreas Fault zone, consists of Franciscan Complex rocks (Norris and Webb 1990).

Local Geology

The project site is in the Santa Clara Valley, a relatively broad and level alluvial basin, bounded by the San Francisco Bay to the north, the Santa Cruz Mountains to the west and southwest, and the Diablo Mountain Range to the east and southeast. The Santa Clara Valley's basin contains alluvial deposits derived from the Diablo Range and the Santa Cruz Mountains. The alluvial deposits originated from the East Bay Hills, located a few miles to the east, and are generally composed of poorly consolidated and interlayered clays, silts, sands, and gravels. In the project site area, there are typically two soil units: Holocene age (up to 11,700 years old), alluvium and Pleistocene age (11,700 to 2,580,00 years old) older alluvium deposits. Both units are derived from sediments from the nearby hills and mountains. Alluvial deposits are interbedded with bay and lacustrine (lake) deposits in the San José area. The valley sediments were deposited as a series of coalescing alluvial fans by streams that drain the adjacent mountains. There are no exposures of bedrock at the site.

The project site is underlain by 1.5 to 4.5 feet of undocumented fill consisting of very stiff to hard lean clay with varying amounts of sand, medium dense to dense clayey sands with varying amounts of gravel, and medium dense well-graded sand with gravel (DayZenLLC 2021c). Below the fill or surface pavements, ground borings conducted for the geotechnical investigation generally encountered soft to hard lean clays with varying amounts of sand and interbedded layers of loose to dense clayey sand, silty sand, and poorly graded sands to depths up to about 87 feet. Below the interbedded clays and sands, the borings encountered dense to very dense poorly graded sand with silt to a depth of 99.5 feet. Beneath the sand, the site contains interbedded layers of soft to hard clays and silts with varying amounts of sand and medium dense to very dense sands with

varying amounts of clay and silt to the maximum depth explored (150 feet) (DayZenLLC 2021c).

Holocene age sediments have low potential to yield fossil resources or to contain significant paleontological resources. However, these Holocene age sediments overlie older, Pleistocene age sediments that have a high potential to contain paleontological resources (DayZenLLC 2021a). The Pleistocene age sediments may be found at depths of 10 feet or more below the ground surface in the region. These sediments have yielded the fossil remains of plants and extinct terrestrial Pleistocene vertebrates (DayZenLLC 2021a)

There are no unique geologic features on or adjacent to the project site. The topography of the project site is essentially flat with a very slight downward slope to the southwest. Erosion hazards are limited, and there are no landslide hazards (DayZenLLC 2021c).

Soils

The project site is underlain by alluvium soil. This alluvium consists of moderately consolidated, deeply weathered, poorly sorted, irregularly interbedded clay, silt, sand. Portions of the site are covered by approximately 1.5 to 4.5 feet of undocumented fill and in some cases covered by asphalt concrete pavements. (DayZenLLC 2021c)

Groundwater

Groundwater in the project site area has been historically high (DayZenLLC 2021c). Fluctuations in the level of the groundwater may occur due to variations in rainfall, underground drainage patterns, and other factors not evident at the time measurements were made. Based on soil borings completed for the site geotechnical investigation, depth to groundwater at the site was observed between approximately 8 and 16 feet below ground surface (bgs) (DayZenLLC 2021a and DayZenLLC 2021c).

Seismicity and Seismic Hazards

While seismologists cannot predict earthquake events, the U.S. Geological Survey's Working Group on California Earthquake Probabilities estimates that there is a 72 percent chance of at least one 6.7 magnitude earthquake occurring in the San Francisco Bay Area between 2014 and 2043 (Aagaard et al. 2016) (CGS 2010). As time progresses and no seismic event occurs, the probability of a seismic event occurring will increase as stress continues to build along local faults. The significant earthquakes that occur in the San Francisco Bay Area are generally associated with crustal movement along well-defined active fault zones of the San Andreas Fault system, which regionally trend in a northwesterly direction (CGS 2022b). Higher levels of shaking and damage would be expected for earthquakes occurring at closer distances to the site.

There are no known active or potentially active faults crossing the project site. The four major faults in the region are the Calaveras Fault (about 9.4 miles east of the site); the San Andreas Fault (about 14.9 miles west of the site); the Hayward Fault (about 5.6 miles

east of the site); and the Monte Vista-Shannon fault (about 10.9 miles west of the site (DayZenLLC 2021c). The site is not located within an Earthquake Fault Zone as defined by the Alquist-Priolo Earthquake Fault Zoning Act. (Pub. Resources Code, § 2621 et seq.) (CGS 2022b).

The structural design of facilities in California are required to incorporate design features to ensure public safety if a seismic event generates sufficient ground motion to impact the structural integrity of the facility in accordance with California Building Standards Code (Cal. Code Regs., tit. 24; CBC 2019, or most current adopted version at the time of final project design). The final geotechnical report will include recommendations on foundation preparation and design necessary to mitigate both seismic and static settlement.

Peak Ground Acceleration and Surface Rupture due to Faulting

The peak ground acceleration determined for the site is 0.58g (DayZenLLC 2021c). There are also no known faults that traverse the site. Since no known faults run through the proposed site, the potential for surface rupture is insignificant.

Liquefaction

During strong ground shaking, loose, saturated, cohesionless soils can experience a temporary loss of shear strength and act like a fluid. This phenomenon is known as liquefaction. Liquefaction depends on the depth to water, grain size distribution, relative soil density, degree of saturation, and intensity and duration of the earthquake (Youd et al. 2001). The potential hazard associated with liquefaction is seismically induced settlement.

According to the State of California Official Seismic Hazard Zones Map (CGS 2022a), the site is in an area considered potentially susceptible to earthquake-induced liquefaction. In addition, according to the Association of Bay Area Governments Earthquake Liquefaction Susceptibility Map (ABAG 2021), the site is in an area considered to have a moderate susceptibility to earthquake-induced liquefaction. Proposed structures would be designed and constructed to account for this in accordance with the California Building Standards Code (CBC 2019, or most current adopted version at the time of final project design).

Lateral Spreading

Lateral spreading typically occurs as a form of horizontal displacement of relatively flat-lying alluvial material toward an open or "free" face, such as an open body of water, channel, or excavation. In soils, this movement is generally due to failure along a weak plane and may often be associated with liquefaction. As cracks develop within the weakened material, blocks of soil displace laterally towards the open face. Cracking and lateral movement may gradually propagate away from the face as blocks continue to break free. Generally, failure in this mode is analytically unpredictable because it is difficult to evaluate where the first tension crack would occur. The project site is relatively

flat, and there is no open face slope (DayZenLLC 2021c). There are no stream channels on or adjacent to the site, and, therefore, the project site would not be subject to lateral spreading. Without open faces of soil from which to initiate spreading, it is unlikely that lateral spreading will occur at the site.

Expansive Soils

Expansive soil can undergo volume changes with changes in moisture content. Specifically, when wetted during the rainy season expansive soil tends to swell and when dried during the summer months, the material shrinks. These volume changes can cause heaving and cracking of slabs-on-grade, pavements, and structures founded on shallow foundations. The upper clay layer at the project site may have moderate expansion potential and, therefore, could experience some degree of volume change when subjected to changes in moisture content, and the overall expansion potential of the soils at the site are low to moderate (DayZenLLC 2021c). The California Building Standards Code requires that the evaluation of expansive soils be incorporated into geotechnical reports for sites with soils known to have expansive properties.

Dynamic Compaction

Dynamic compaction is when soils change volume (settle and decrease in size) due to vibrations generally seismic in origin. A geotechnical investigation of the site suggests that dynamic compaction of 1/3 of an inch vertically in a 30-to-50-foot horizontal run may occur (DayZenLLC 2021c).

Regulatory Background

The project would be required to comply with all applicable federal, state, and local laws and regulations and would need to obtain building permits that would be issued by the city of San José. The issuance of the building permits and oversight provided by the city of San José would confirm that the project complies with the applicable regulatory framework.

Federal

There are no federal regulations related to geology and soils and paleontological resources that apply to this project. However, the BLM has developed a PFYC system. Because of its demonstrated usefulness as a resource management tool, the PFYC has been utilized for many years for projects across the country, regardless of land ownership. It is a predictive resource management tool that classifies geologic units on their likelihood to contain paleontological resources.

State

Alquist-Priolo Earthquake Fault Zoning Act. The Alquist-Priolo Earthquake Fault Zoning Act (Pub. Resources Code, § 2621 et seq.) was passed following the 1971 San Fernando earthquake. The act regulates development in California near known active faults due to hazards associated with surface fault ruptures. Alquist-Priolo maps are

distributed to affected cities, counties, and state agencies for their use in planning and controlling new construction. Areas within an Alquist-Priolo Earthquake Fault Zone require special studies to evaluate the potential for surface rupture to ensure that no structures intended for human occupancy are constructed across an active fault.

Seismic Hazards Mapping Act. The Seismic Hazards Mapping Act (SHMA, Pub. Resources Code, § 2690 et seq.) was passed in 1990 following the 1989 Loma Prieta earthquake. The SHMA directs the California Geological Survey (CGS) to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. CGS has completed seismic hazard mapping for the portions of California most susceptible to liquefaction, landslides, and ground shaking, including the central San Francisco Bay Area. The SHMA requires that agencies only approve projects in seismic hazard zones following site-specific geotechnical investigations to determine if the seismic hazard is present and to identify measures to reduce earthquake-related hazards.

California Building Standards Code. The California Building Standards Code (Cal. Code Regs., tit. 24; CBC) prescribes standards for constructing safer buildings. The CBC contains provisions for earthquake safety based on factors including occupancy type, soil and rock profile, ground strength, and distance to seismic sources. The CBC requires that a site-specific geotechnical investigation report be prepared for most development projects to evaluate seismic and geologic conditions, such as surface fault ruptures, ground shaking, liquefaction, differential settlement, lateral spreading, expansive soils, and slope stability. The CBC is updated every three years. The current version is the 2019 CBC; however, the 2019 CBC will be replaced with the 2022 edition on Jan 1, 2023. The project will be required to comply with the most current CBC at the time of final design.

California Division of Occupational Safety and Health Regulations. Excavation, shoring, and trenching activities during construction are subject to occupational safety standards for stabilization by the California Division of Occupational Safety and Health (Cal/OSHA) under California Code of Regulations, title 8, including Excavation Rules. These regulations minimize the potential for instability and collapse that could injure construction workers on the site.

State Paleontological Laws, Ordinances, Regulations, and Standards. Paleontological resources are the fossilized remains of organisms from prehistoric environments found in geologic strata. They range from mammoth and dinosaur bones to impressions of ancient animals and plants, trace remains, and microfossils. These are valued for the information they yield about the history of the earth and its past ecological settings. Under the California Environmental Quality Act (CEQA) Guidelines (Cal. Code Regs., tit. 14, § 15000 et seq.), a project would have a significant impact on paleontological resources if it would disturb or destroy a unique paleontological resource or site or unique geologic feature. Public Resources Code section 5097.5) makes the unauthorized removal of a paleontological resource a misdemeanor.

CEQA encourages the protection of all aspects of the environment by requiring state and local agencies to prepare multidisciplinary analyses of the environmental impacts of a project and to make decisions based on the findings of those analyses. CEQA includes in its definition of historical resources any object or site that "has yielded, or may be likely to yield, information important in prehistory" (Cal. Code Regs., tit. 14, § 15064.5(a)(3)(D)), which is typically interpreted by professional scientists as including fossil materials and other paleontological resources. More specifically, the destruction of a "unique paleontological resource or site or unique geologic feature" may be a significant impact under CEQA (Guidelines, Appendix G.VII. (f)).

Local

City of San José Municipal Code. Local agencies must regulate the construction of buildings used for human occupancy in seismic hazard zones. The CBC Cal. Code Regs., tit. 24)) serves as the basis for the design and construction of buildings in the state. Currently, the 2019 CBC contains provisions for earthquake safety based on factors including occupancy type, soil and rock profile, the strength of the ground, and distance to seismic resources. The 2019 CBC will be replaced with the 2022 edition on Jan 1, 2023. The project will be required to comply with the most current CBC at the time of final design.

The San José Municipal Code title 24 includes the California Building, Plumbing, Mechanical, Electrical, Existing Building, Historical Building, and Green Building Codes. The requirements for building safety and earthquake hazard reduction are also addressed in San José Municipal Code chapters 17.40 (Dangerous Buildings) and 17.10 (Geologic Hazard Regulations) (San José 2022a, or most current adopted version of the Municipal Code).

The requirements for grading, excavation, and erosion control are included in San José Municipal Code chapter 17.1 (Building Code, Part 6 Excavation and Grading). In accordance with the San José Municipal Code, the Director of Public Works must issue a Certificate of Geologic Hazard Clearance prior to the issuance of grading and building permits within defined geologic hazard zones (San José 2022a, or most current adopted version of the Municipal Code).

The city's General Plan was reviewed for provisions relevant to paleontological resources. Section 3 of the General Plan identifies the protection of paleontological resources as a goal of the city.

City of San José General Plan. *Envision San José 2040 General Plan* includes the following goals and policies applicable to all development projects in the city of San José (San José 2022b).

Goal ER-10 – Archaeology and Paleontology - Preserve and conserve archaeologically significant structures, sites, districts, and artifacts in order to promote a greater sense of

historic awareness and community identity. To achieve this goal for this project the following policies would apply: ER-10.1, ER-10.2, and ER-10.3 (San José 2022b).

Goal EC-3 – Seismic Hazards - Minimize the risk of injury, loss of life, property damage, and community disruption from seismic shaking, fault rupture, ground failure (liquefaction and lateral spreading), earthquake-induced landslides, and other earthquake-induced ground deformation. To achieve this goal for this project the following policies would apply: EC-3.1 and EC-3.2 (San José 2022b).

Goal EC-4 – Geologic and Soil Hazards - Minimize the risk of injury, loss of life, and property damage from soil and slope instability including landslides, differential settlement, and accelerated erosion. To achieve this goal for this project the following policies would apply: EC-4.1, EC-4.2, EC-4.4, EC-4.5, EC-4.7, EC-4.9, EC-4.10, EC-4.11 and EC-4.12 (San José 2022b).

4.7.2 Environmental Impacts

a. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Construction and Operation

Less Than Significant Impact. The probability that construction of the proposed project would have an impact on the risk of loss, injury, or death involving the rupture of an earthquake fault during construction is remote. The project site is located within the seismically active San Francisco Bay region, but there are no known active or potentially active faults crossing the project site (DayZenLLC 2021c). The nearest historically active fault, the Hayward-Rogers Creek Fault, is approximately 5.6 miles from the project site (CGS 2021). No active or potentially active faults are known to pass directly beneath the site. Due to the distance of faults from the site and the absence of known faults within or near the site, the development of the project would not expose people or buildings to known risks of fault rupture. Given this, the impact would be less than significant. Additionally, the operation of the project is not expected to exacerbate the rupture of known earthquake faults. Therefore, impacts related to fault rupture would be less than significant.

ii. Strong seismic ground shaking?

Construction and Operation

Less Than Significant Impact. Earthquakes along several nearby active faults in the region could cause strong ground shaking at the site (DayZenLLC 2021c). The intensity of ground motion and the damage done by ground shaking would depend on the characteristics of the generating fault, distance to the fault and rupture zone, earthquake magnitude, earthquake duration, and site-specific geologic conditions. The design of the project, including, among other things, the building foundations, would include an assessment of the potential impacts of strong seismic ground shaking from a site-specific design-level seismic event. Seismic hazards would be minimized, to the extent feasible, by conformance to the applicable seismic design criteria of the CBC (CBC 2019, or most current adopted version at the time of final design) and the city of San José General Plan (San José 2022b).

A project-specific geotechnical engineering report would be provided to the local planning/building department for review and approval prior to the issuance of a building permit, and the project would be required to comply with all recommendations in this report when constructing the project. With the implementation of seismic design criteria per the CBC (CBC 2019, or most current adopted version at the time of final design), as well as the anticipated project-specific recommendations in the final geotechnical engineering report, the project would not expose people or property, directly or indirectly, to significant impacts associated with geologic or seismic ground shaking.

Additionally, the operation of the project is not expected to exacerbate the rupture of known earthquake faults. Therefore, impacts related to fault rupture would be less than significant.

iii. Seismic-related ground failure, including liquefaction?

Construction and Operation

Less than Significant Impact. The site is located within a state-designated Liquefaction Hazard Zone, and there is potential for soil layers at the site to liquefy during a seismic event (DayZenLLC 2021c). A geotechnical investigation of the site suggests that dynamic compaction of 1/3 of an inch vertically in a 30-to-50-foot horizontal run may occur (DayZenLLC 2021c). In addition, the project site is not subject to lateral spreading due to its distance from stream channels. The project site and vicinity are flat, and the project site is not within a landslide hazard zone

The likely consequence of potential liquefaction at the site would be settlement. The proposed structures would be designed and constructed in accordance with applicable provisions of the CBC (CBC 2019, or most current adopted version at the time of final design), and the city of San José General Plan (San José 2022b) that are designed to address liquefaction concerns to the extent feasible. This project-specific design would

be included within a geotechnical engineering report and provided to the local planning/building department for review and approval prior to the issuance of a building permit, and the project would be required to comply with all recommendations in this report when constructing the project. Therefore, with the implementation of the seismic design criteria for ground failure and the anticipated project-specific recommendations in the final geotechnical engineering report, the project would not expose people or property, directly or indirectly, to significant impacts associated with geologic or seismic ground shaking, including ground failure, liquefaction, or seismically induced subsidence. Therefore, risks to people or structures, or exacerbating ground failure during strong seismic ground-shaking would continue to be less than significant.

Additionally, the operation of the project is not expected to exacerbate seismic-related ground failure. Therefore, the impacts related to fault rupture would be less than significant.

iv. Landslides?

Construction and Operation

Less Than Significant Impact. The proposed project is not located within a landslide hazard zone, and the project site is relatively flat with no open faces or slopes. Grading of the project site would not create steep slopes and construction of the proposed project would not cause a landslide. The construction of the project would not change the general surface morphology of the site, and operation and maintenance at the site will not change the general surface morphology of the site. Therefore, no direct or indirect significant impacts associated with landslides are expected to occur. Impacts would be less than significant.

b. Would the project result in substantial soil erosion or the loss of topsoil?

Construction and Operation

Less Than Significant Impact. Ground disturbance at the site would be required for demolition and on-site improvements. Ground disturbance would expose soils and increase the potential for wind or water related erosion and sedimentation at the site until construction is complete. City of San José General Plan Goal EC-4.5 requires an Erosion Control Plan for private development projects that have a soil disturbance of one acre or more, are adjacent to a creek/river, and/or are in hillside areas (San José 2022b). An Erosion Control Plan is also required if any grading would occur between October 15 and April 15 (San José 2022b). The proposed development would disturb one acre or more of soil, and, therefore, an Erosion Control Plan would be required in conformance with the General Plan Goal EC-4.5. Preparation of an Erosion Control Plan will ensure the project follows city of San José General Plan policies and will provide a site-specific analysis to determine necessary design modifications and/or off-site improvements to reduce the possibility of substantial erosion on site (DayZenLLC 2021a). Best

Management Practices (BMPs) for erosion and sedimentation control taken to comply with the National Pollution Discharge Elimination System (NPDES) permit would ensure the site would not include areas of exposed topsoil subject to erosion. Surface water runoff from the facility is not expected to impact soil erosion or cause the loss of topsoil during project operation.

The City of San José's NPDES permit, urban runoff policies, and the municipal code are the primary means of enforcing erosion control measures through the grading and building permit process. By complying with existing permits and other applicable laws and regulations, substantial soil erosion or loss of topsoil would not occur, and runoff from the project site would not violate the applicable waste discharge requirements or otherwise contribute to the degradation of stormwater runoff quality. Therefore, impacts related to erosion and loss of topsoil would be less than significant and no mitigation is required.

Occasional minor surface disturbance may continue to be required during maintenance activities, but such disturbance would be temporary and likely small. Continuous operation and maintenance work would not result in increased erosion or topsoil loss, and, therefore, a less than significant impact would be associated with erosion or loss of topsoil.

c. Would the project be located on geologic units or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Construction and Operation

Less Than Significant Impact. There are no open faces, such as the steep bank of a stream channel, within a distance considered susceptible to lateral spreading. Thus, the project site and immediate surrounding area are not subject to landslides or lateral spreading (DayZenLLC 2021a).

The project site is located within a State of California Liquefaction Zone. A design-level geotechnical investigation would be prepared for the proposed development that identifies site-specific ground failure hazards, such as liquefaction, subsidence, and lateral spreading and appropriate techniques to minimize risks to people and structures. In addition, the project would be designed and constructed in accordance with the most recent CBC (DayZenLLC 2021a). Both the geotechnical engineering report and final project design documents would be provided to the local planning/building department for review and approval prior to the issuance of a building permit. The project would not exacerbate the existing geologic conditions or soils on site. With the implementation of applicable design criteria per the CBC (CBC 2019, or most current adopted version at the time of final design) as well as the incorporation of the anticipated project-specific design recommendations in the final geotechnical engineering report, the project would not

expose people or property, directly or indirectly, to unstable geologic or soil units that could result from the construction of this project.

Operation and maintenance activities would not materially change the surface morphology or geotechnical characteristics of the material beneath the project facilities. Thus, operation and maintenance activities would not introduce new soil stability hazards. Occasional minor surface disturbance may continue to be required during maintenance activities, but such disturbance would be temporary and small. The project would not expose people or property, directly or indirectly, to unstable geologic or soil units.

d. Would the project be located on expansive soil, as defined in Section 1803.5.3 of the California Building Standards Code (CBC 2019, or most current adopted version at the time of final design), creating substantial direct or indirect risks to life or property?

Construction and Operation

Less Than Significant Impact. Expansive soil behavior is a condition where clay soils react to changes in moisture content by expanding or contracting. Poorly drained soils have greater shrink-swell potential. Potential causes of moisture fluctuations include drying during construction and subsequent wetting from rain, capillary rise, landscape irrigation, and type of plant selection. If untreated, expansive soils could damage future buildings and pavements on the project site.

The project site is located on expansive soil (DayZenLLC 2021c). A project-specific geotechnical engineering report along with the final project design would be required to address, as needed, any potential issues arising from expansive soils. The final project design documents would be provided to the local planning/building department for review and approval prior to the issuance of a building permit, and the project would be required to incorporate all recommendations therein. With the implementation of applicable design criteria per the CBC (CBC 2019, or most current adopted version at the time of final design) and the City of San José General Plan (San José 2022b) as well as the incorporation of the anticipated recommendations in the final geotechnical engineering report, the project would not create substantial direct or indirect risks to life or property. Therefore, risks to people or structures from expansive soil would be less than significant with mitigation incorporated into the project design.

Operation and maintenance activities would not change materially the surface morphology or geotechnical characteristics of the material beneath the project facilities. Thus, operation and maintenance activities would not introduce new soil stability hazards. Occasional minor surface disturbance may continue to be required during maintenance activities, but such disturbance would be temporary and small. The project would not expose people or property, directly or indirectly, to unstable geologic or soil units.

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Construction and Operation

No Impact. The project would connect to an existing city-provided sanitary sewer connection, so the project site would not need to support septic tanks or alternative wastewater disposal systems (DayZenLLC 2021a). Therefore, there would be no impact to soils because of sanitary waste disposal from the project during construction or operation.

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

Construction and Operation

Less Than Significant with Mitigation Incorporated. The project site is located in the Santa Clara Valley, an area known to have scientifically significant but widespread or intermittent fossil discoveries. Surficial sediment has been mapped as Holocene (11,700 years before present), and paleontological evidence indicates that Pleistocene (2.6 million to 11,700 years before present) sediments may also be present at or near the surface. There are no known paleontological resources within the project site. A search of the University of California Museum of Paleontology database failed to identify any paleontological resources in the vicinity of the site (UCMP 2021). Five fossil sites have been found at or near the ground surface within three miles of the project site, especially along stream beds. However, the general area has been extensively developed over the last 50 years as part of the technology research and development area known as Silicon Valley. The level of paleontological sensitivity at the project site is low for Holocene age soils and high for Pleistocene age soils (DayZenLLC 2021a). Thus, ground disturbing activities of 10 feet or more have the potential to impact undiscovered paleontological resources.

Staff proposes mitigation measure **GEO-1,** which requires a qualified professional paleontologist to be on-call prior to the commencement of construction, and a Worker Environmental Awareness Program that includes identification, handling, and reporting procedures be created and executed. Staff concludes that with the implementation of **GEO-1**, impacts to unique paleontological resources would be reduced to less than a significant level.

There are no unique geologic features on or adjacent the project site, and, thus, there would be no project impacts to such features.

There is little potential to disturb paleontological resources during operations because there are no known plans or operational activities that would result in the disturbance of previously undisturbed soil. Occasional minor surface disturbance may continue to be

required during maintenance activities, but such disturbance would be temporary, small and most likely limited to disturbance of fill. There would be no impact to paleontological resources.

4.7.3 Mitigation Measures

GEO-1:

- The applicant shall secure the services of a qualified professional paleontologist, as defined by the Society of Vertebrate Paleontology, to be on-call prior to the commencement of construction. The paleontologist shall be experienced in teaching non-specialists to recognize fossil materials and how to notify in the event of encountering a suspected fossil. If suspected fossils are encountered during construction, the construction workers shall halt construction within 50 feet of any potential fossil find and notify the paleontologist, who shall evaluate its significance.
- If a fossil is encountered and determined 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 the immediate area shall be halted or diverted to allow recovery of fossil remains in a timely manner. Fossil remains collected shall be cleaned, repaired, sorted, and cataloged, along with copies of all pertinent field notes, photos, and maps.
- The paleontologist shall prepare a paleontological resource monitoring report that outlines the results of the monitoring program and any encountered fossils. The report shall be submitted to the Director, or Director's designee, of the City of San José Department of Planning, Building & Code Enforcement (PBCE) for review and approval. The report and any fossil remains collected shall be submitted to a scientific institution with paleontological collections.
- Prior to the commencement of construction, the applicant shall secure the services of a qualified paleontological specialist. The specialist shall prepare a Worker Environmental Awareness Program to instruct site workers of the obligation to protect and preserve valuable paleontological resources for review by the Director, or Director's designee, of the City of San José PBCE. This program shall be provided to all construction workers via a recorded presentation and shall include a discussion of applicable laws and penalties under the laws; samples or visual aids of resources that could be encountered in the project vicinity; instructions regarding the need to halt work in the vicinity of any potential paleontological resources encountered; and measures to notify their supervisor, the applicant, and the specialists.

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4.8 Greenhouse Gas Emissions

This section describes the environmental and regulatory setting and discusses greenhouse gas (GHG) emissions impacts associated with the demolition/construction, direct "stationary source" emissions from emergency backup generators, and indirect and "non-stationary source" emissions from the operation of the project.

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

Environmental checklist established CEQA Guidelines, Appendix G.

4.8.1 Summary

In this analysis, CEC staff (staff) concludes that, with the implementation of mitigation measures **GHG-1** and **GHG-2**, the project's potentially significant GHG emissions impacts would be reduced to less than significant.

This section includes both quantitative and qualitative analyses of the project's three categories of GHG emissions: (1) emissions related to the construction/demolition phase of the project; (2) direct "stationary source" emissions from the operation of the emergency backup generators; and (3) indirect and "non-stationary source" emissions from the operation of the project, the vast majority of which are indirect emissions from the electricity consumed by the project.

For each category of GHG emissions, this section describes and calculates the emissions, identifies the threshold of significance that applies to the project's emissions source, and applies the applicable methodology or threshold of significance to determine if the project's GHG emissions impacts are less than significant.

Significance Criteria

CEQA Guidelines for GHG Emissions. With the enactment of Senate Bill 97 (Chapter 185, Statutes of 2007), the Governor's Office of Planning and Research was required by July 1, 2009, to prepare, develop, and transmit to the Natural Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. Those amendments to the CEQA guidelines became effective March 18, 2010, and were

subsequently updated in December 2018 to further address the analysis of GHG emissions, including the following:

- Lead agencies must analyze the GHG emissions of proposed projects. (See CEQA Guidelines, § 15064.4, subd. (a))
- The focus of the lead agency's analysis should be on the project's effect on climate change, rather than simply focusing on the quantity of emissions and how that quantity of emissions compares to statewide or global emissions. (See CEQA Guidelines, § 15064.4, subd. (b))
- The impacts analysis of GHG emissions is global in nature and thus should be considered in a broader context. A project's incremental contribution may be cumulatively considerable even if it appears relatively small compared to statewide, national, or global emissions. (See CEQA Guidelines, § 15064.4, subd. (b))
- Lead agencies should consider a timeframe for the analysis that is appropriate for the project. (See CEQA Guidelines, § 15064.4, subd. (b))
- A lead agency's analysis must reasonably reflect evolving scientific knowledge and state regulatory schemes. (See CEQA Guidelines, § 15064.4, subd. (b).)
- Lead agencies may rely on an adopted statewide, regional, or local plan in evaluating a project's GHG emissions. (See CEQA Guidelines, § 15064.4, subd. (b)(3)) Lead agencies may analyze and mitigate the significant impact of GHG emissions as part of a larger plan for the reduction of greenhouse gases. (See CEQA Guidelines, §15183.5, sub. (a)) A project's incremental contribution to a cumulative GHG emissions effect may be determined not to be significant and the effects of the project to not be cumulatively considerable if the project complies with the requirements of the GHG emissions reduction strategy. (See CEQA Guidelines, §§ 15064, sub. (h)(3); 15130, sub. (d); 15183, sub. (b))
- In determining the significance of a project's impacts, the lead agency may consider a project's consistency with the state's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is consistent with those plans, goals, or strategies. (See CEQA Guidelines, § 15064.4, subd. (b)(3))

The lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to intelligently account for the project's incremental contribution to climate change. (See CEQA Guidelines, § 15064.4, subd. (c).)

The Bay Area Air Quality Management District (BAAQMD) California Environmental Quality Act (CEQA) Guidelines include recommended thresholds of significance for determining whether projects would have significant adverse environmental impacts.

Construction/Demolition Emissions. For construction-related GHG emissions, the BAAQMD CEQA Guidelines do not identify a numerical GHG emissions threshold of

significance, but instead recommend that those emissions should be quantified and disclosed. BAAQMD further recommends the incorporation of best management practices (BMPs) to reduce GHG emissions during construction, as feasible and applicable.

Direct Stationary Sources Emissions. For stationary sources, BAAQMD adopted in the BAAQMD CEQA Guidelines a numeric threshold of significance of 10,000 metric tons of carbon dioxide equivalent per year ($MTCO_2e/yr$) for projects that require permits from BAAQMD (BAAQMD 2017b). However, the threshold of 10,000 $MTCO_2e/yr$ was based on the state's 2020 GHG target, codified in Health and Safety Code, section 38550, which is now superseded by the 2030 GHG target, codified in Health and Safety Code, section 38566, as enacted in SB 32, and a 2045 target set forth in former Governor Brown's Executive Order B-55-18. In November 2021, BAAQMD staff was in the process of preparing and presenting to the BAAQMD board for approval an update to the CEQA GHG threshold of significance for stationary sources to 2,000 $MTCO_2e/yr$ or compliance with the State Air Resources Board's (CARB) cap-and-trade program, codified in Health and Safety Code, section 38562 (BAAQMD 2021b). However, the BAAQMD staff has paused work on the stationary source thresholds to focus on updating thresholds for land use projects and plans[1]. The BAAQMD website states that after the project and plan level thresholds are adopted, which occurred in April 2022, BAAQMD staff will turn their attention to the stationary source threshold of significance and further investigate appropriate approaches. In this analysis, in addition to the existing BAAQMD CEQA Guidelines threshold of significance of 10,000 $MTCO_2e/yr$, staff also evaluates the GHG impacts of the emergency backup generators with the consideration of the pending update to the BAAQMD CEQA GHG threshold of significance. Staff identifies mitigation that would reduce the level of GHG emissions from the emergency backup generators to below the existing applicable significance threshold and the proposed, pending significance threshold.

Indirect and Non-Stationary Source Emissions. Other project-related emissions from mobile sources, area sources, energy use, and water use would not be included for comparison to the stationary source threshold of significance, based on guidance in the BAAQMD CEQA Guidelines (BAAQMD 2017b). Instead, in April 2022, the BAAQMD adopted updated thresholds of significance with the publication of *Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans* (BAAQMD 2022) to assist lead agencies when evaluating the indirect and "non-stationary" source emissions of land use development projects. Under the BAAQMD's 2022 CEQA thresholds of significance for land use projects, a CEQA lead agency can conclude that a project will not make a cumulatively considerable contribution to global climate change if the project is designed and built to be consistent with the applicable local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b) (as "option B" on p.2 of BAAQMD's 2022 Justification Report [BAAQMD 2022]). GHG impacts from project related indirect and non-stationary

[1] BAAQMD CEQA Thresholds and Guidelines Update website: https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines. Accessed November 2022.

emissions sources would be considered to have a less-than-significant impact if the project is consistent with the city of San José's 2030 GHG Reduction Strategy (GHGRS). Other applicable regulatory programs and policies adopted by CARB or other California agencies, described under Regulatory Background, also contribute to staff's analysis of impacts.

The city's 2030 GHGRS is a comprehensive plan to achieve the city's share of statewide emissions reductions for 2030, as set forth by SB 32 (San José 2020). The GHGRS was prepared under the BAAQMD CEQA Guidelines, and particularly in conformance with CEQA Guidelines Section 15183.5, which specifically addresses the development of Greenhouse Gas Reduction Plans for tiering and streamlining GHG analysis under CEQA (San José 2020). As a result, a lead agency may conclude that a project's incremental contribution to a cumulative effect is not cumulatively considerable if it complies with the requirements of the city's GHGRS. However, an environmental document that relies on it "must identify those requirements specified in the plan that apply to the project, and, if those requirements are not otherwise binding and enforceable, incorporate those requirements as mitigation measures applicable to the project."[2]

Specifically, the city's 2030 GHGRS meets the following criteria for a Qualified Climate Action Plan (San José 2020):

- Quantify emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area.
- Establish a level, based on substantial evidence, below which the contribution of emissions from activities covered by the plan would not be cumulatively considerable.
- Identify and analyze the emissions resulting from specific actions or categories of actions anticipated within the geographic area.
- Specify measures or a group of measures, including performance standards that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level.
- Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specific levels.
- Adopt the GHG Reduction Strategy in a public process following environmental review.

1) Construction/Demolition Emissions

As discussed in more detail under environmental checklist criterion "a," the applicant estimated that the maximum annual GHG emissions from construction activities would be approximately 967 $MTCO_2e$ (DayZenLLC 2021a, Table 4.3-6). Therefore, the project's short-term construction-related GHG emissions have been quantified and disclosed. In

[2] CEQA Guidelines, § 15183.5(b)(2).

addition, the project would implement BMPs, as specified in mitigation measure **AQ-1**, that would reduce construction-related GHG emissions. The project would also exceed the city's construction and demolition waste diversion requirement (DayZenLLC 2021c), which would further reduce GHG emissions. Staff concludes that the project's construction-related GHG emissions impacts would be less than significant.

2) Direct Stationary Source Emissions (Emergency Backup Generators)

The project's emergency backup generators are stationary sources of direct GHG emissions from project operation. The emergency backup generators would emit GHG emissions mostly during readiness testing and maintenance and infrequently during short durations of emergency operation. The GHG emissions from the emergency backup generators are subject to the BAAQMD CEQA Guidelines GHG threshold of significance for stationary sources. As discussed above, the BAAQMD CEQA Guidelines' existing GHG threshold for stationary sources is 10,000 $MTCO_2e/yr$. In November 2021, BAAQMD staff was in the process of preparing and presenting to the BAAQMD board for approval an update to lower the threshold of significance to 2,000 $MTCO_2e/yr$ or compliance with CARB's cap-and-trade program. However, the BAAQMD staff has paused work on the stationary source thresholds to focus on updating thresholds for land use projects and plans. After the project and plan level thresholds are adopted, which occurred in April 2022, BAAQMD staff will turn their attention to the stationary source threshold of significance and further investigate appropriate approaches.

As discussed in more detail under environmental checklist criterion "a," the applicant has proposed to use renewable diesel as primary fuel or ultra-low sulfur diesel as secondary fuel for the emergency backup generators. Staff proposes mitigation measure **GHG-1** to ensure the applicant would use renewable diesel for 100 percent of total energy use by the emergency backup generators, and only use ultra-low sulfur diesel as a secondary fuel in the event of supply challenges or disruption in obtaining renewable diesel. The City of San José Planning, Building and Code Enforcement (PBCE) may grant temporary relief from the 100 percent renewable diesel requirement if the applicant can demonstrate a good faith effort to comply with the requirement and that compliance is not practical.

BAAQMD CEQA Guidelines indicates that biogenic CO_2 emissions would not be included in the quantification of GHG emissions for characterizing the CEQA impact significance for a project (BAAQMD2017b, page 4-5). Accordingly, with the use of 100 percent renewable diesel, the project's GHG emissions from readiness testing and maintenance of the emergency backup generators would be exempt from the stationary source threshold per BAAQMD CEQA Guidelines. Therefore, staff expects that the GHG emissions from the emergency backup generators for routine readiness testing and maintenance would be less than significant.

Despite the exemption from the stationary source threshold, staff performed a quantitative estimation of the GHG emissions from readiness testing and maintenance of the emergency backup generators. With the assumption of 50 hours of readiness testing

and maintenance per year per engine and the use of renewable diesel, staff estimates that the fuel-cycle GHG emissions from the emergency backup generators would be 1,261 $MTCO_2e$/yr, which is lower than the BAAQMD CEQA Guidelines' existing GHG threshold of significance of 10,000 $MTCO_2e$/yr. The fuel-cycle GHG emissions from the emergency backup generators would also be lower than 2,000 $MTCO_2e$/yr, which has been proposed by the BAAQMD staff as an updated GHG threshold of significance. This proposed update to the BAAQMD threshold of significance has not been adopted as of the date of this analysis. As well, GHG emissions from the project would not exceed CARB's regulatory threshold level for required inclusion in and compliance with the cap-and-trade program, which is 25,000 $MTCO_2e$/yr.

The project's likelihood of operating the emergency backup generators for unplanned circumstances or emergency purposes is low and, if such operation did occur, it would be infrequent and of short duration (See **Appendix B**). Staff concludes that an estimate of 50 hours of emergency backup generator operation per year adequately accounts for both readiness testing and maintenance, and emergency operation, for any given year, even if ultra-low sulfur diesel is used during short emergency operation durations in the event of supply challenges or disruption in obtaining renewable diesel.

Staff concludes that with the implementation of mitigation measure **GHG-1**, the GHG emissions from the project's stationary sources would be less than significant. In addition, with the implementation of **GHG-1**, the project's stationary sources would not conflict with plans, policies, or regulations adopted to achieve long-term GHG emissions reduction goals.

3) Indirect and Non-Stationary Source Emissions

The operation of the project would generate GHG emissions beyond those from the operation of the emergency backup generators, including offsite vehicle trips for worker commutes and material deliveries, and facility upkeep, including architectural coatings, consumer product use, landscaping, water use, waste generation, and electricity use. The GHG emissions from indirect and non-stationary sources are shown in **Table 4.8-4** under environmental checklist criterion "a."

The GHG impacts from the indirect and non-stationary sources would be considered to have a less-than-significant impact if the project is consistent with the city's 2030 GHGRS and applicable regulatory programs and policies adopted by CARB or other California agencies. Under environmental checklist criterion "b," staff identifies the requirements specified in the GHGRS and regulatory programs and policies that apply to the project.

Indirect Emissions from Electricity Use. Staff conservatively assumes the project could consume up to 814,680 megawatt hours (MWh) of electricity per year after full build-out, but actual electricity demand would be lower. With PG&E's 2020 carbon intensity of 160 lbs CO_2e/MWh, the worst-case GHG emissions due to electricity use during full build-out operation would be 59,125 $MTCO_2e$/yr.

As with all load serving entities in California, PG&E's carbon intensity factor will continue to change as the power mix gradually increases the use of renewable resources to achieve California's GHG and renewable energy goals. Actual GHG emissions associated with electricity use at the project will be much less than 59,125 $MTCO_2e$/yr since actual electricity use will be less than the maximum and the PG&E annual average emission factor will be tracking downward towards "zero net" with the implementation of state and local measures to reduce GHG emissions associated with electricity production and California's fuels.

Mitigation measure **GHG-2** would require the project owner to participate in the San José Clean Energy (SJCE) at the Total Green level (i.e., 100 percent carbon-free electricity) for electricity accounts associated with the project, or enter into an electricity contract with SJCE or participate in a clean energy program that accomplishes the same goals of 100 percent carbon-free electricity as the SJCE Total Green Level. With the implementation of mitigation measure **GHG-2**, the project's indirect GHG emissions from electricity use would comply with the Renewable Energy Development requirements of the city's 2030 GHGRS. The project's indirect GHG emissions from electricity use would be less than significant under the BAAQMD's 2022 CEQA thresholds of significance for land use projects "option B".

In addition, as discussed in detail under environmental checklist criterion "b," the project would comply with the city's general plan policy MS-2.11 because it would be built in accordance with Title 24 and CALGreen and would include green building measures to reduce energy consumption. The project would also utilize lighting control to reduce energy usage for new exterior lighting and air economization for building cooling. The project would comply with Energy and Climate Measure (ECM)-1 – Energy Efficiency in BAAQMD's 2017 Bay Area Clean Air Plan. Therefore, for these and the reasons discussed above, and with the implementation of **GHG-2**, the project's indirect emissions from electricity use would not conflict with plans, policies, or regulations adopted to achieve long-term GHG emissions reduction goals.

Other Indirect and Non-Stationary Source Emissions. The project's other indirect and non-stationary sources include mobile sources, landscaping, water use, waste, and refrigerant use as shown in **Table 4.8-4**. The project's compliance with the city's GHGRS, general plan, and applicable regulatory programs and policies adopted by CARB and other California agencies would ensure the project's GHG emissions from these sources would not have a significant impact. For example, staff analyzed the project's compliance and consistency with policies related to transportation (CD-2.1, CD-3.2, CD-3.4, TR-2.8, and TR 7.1), water (MS-3.1, MS-3.2, MS-19.4, and MS-21.3), and waste (Zero Waste Goal). Therefore, staff concludes that these indirect and non-stationary sources would comply with local and regional plans and strategies adopted to reduce GHG emissions and the project's GHG impacts from these sources would be less than significant.

In summary, staff concludes that with the implementation of mitigation measure **GHG-2** and other proposed design measures, GHG emissions related to the project from indirect

and non-stationary sources would be consistent with the applicable plans and policies adopted to reduce GHG emissions and would comply with all regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. The potential for the project to conflict with an applicable plan, policy, or regulation for GHG reductions would be less than significant.

4.8.2 Environmental Setting

Unlike emissions of criteria and toxic air pollutants, which have local or regional impacts, emissions of GHGs have a much broader, global impact. Global warming associated with the "greenhouse effect" is a process whereby GHGs accumulating in the atmosphere contribute to an increase in the temperature of the Earth's atmosphere. The principal GHGs that contribute to global warming and climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), black carbon, and fluorinated gases (F-gases) (hydrofluorocarbons [HFCs], perfluorocarbons [PFCs], and sulfur hexafluoride [SF_6]). Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the transportation, industrial/manufacturing, utility, residential, commercial, and agricultural sectors.

Each GHG has its own potency and effect upon the Earth's energy balance, expressed in terms of a global warming potential (GWP), with CO_2 being assigned a value of 1. Specifically, the GWP is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given time relative to the emissions of 1 ton of CO_2. The larger the GWP, the more that a given gas warms the Earth compared to CO_2 over that time. The time usually used for GWPs is 100 years.

For example, CH_4 has a GWP of 28 over 100 years from the Fifth Assessment Report (AR5)[3] of the Intergovernmental Panel on Climate Change (IPCC 2013), which means that it has a global warming effect 28 times greater than CO_2 on an equal-mass basis. The F-gases are sometimes called high-GWP gases because, for a given amount of mass, they trap substantially more heat than CO_2. The GWPs for these gases can be in the thousands or tens of thousands. The carbon dioxide equivalent (CO_2e) for a source is obtained by multiplying each quantity of GHG by its GWP and then adding the results together to obtain a single, combined emission rate representing all GHGs in terms of CO_2e.

Regulatory Background

Federal

The project would not be subject to any federal requirements for GHGs.

[3] The GWP values have been refined in the 2021 IPCC Sixth Assessment Report (AR6), which is available online at: https://www.ipcc.ch/report/ar6/wg1/. The GWP for CH_4 has been updated to 29.8 from fossil fuel sources and 27.0 from non-fossil sources.

State

Early State Actions

California Global Warming Solutions Act of 2006. In 2006, the state Legislature passed the California Global Warming Solutions Act of 2006 Health and Safety Code, section 38500 et. seq), or Assembly Bill (AB) 32, which provided the initial framework for regulating GHG emissions in California. This law required CARB to design and implement GHG emissions limits, regulations, and other measures such that statewide GHG emissions are reduced in a technologically feasible and cost-effective manner to 1990 levels by 2020. AB 32 also required CARB to implement a mandatory GHG emissions reporting program for major sources, which includes electricity generators, industrial facilities, fuel suppliers, and electricity importers.

CARB Scoping Plan. Part of the Legislature's direction to CARB under AB 32 was to develop a scoping plan that serves as a statewide planning document to coordinate the main strategies California will use to reduce GHG emissions that cause climate change. CARB approved the AB 32 Climate Change Scoping Plan (scoping plan) in 2008 and released updates in 2014 and 2017 with the next update planned for 2022. The scoping plan includes a range of GHG emissions reduction actions, which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based compliance mechanisms, such as the cap-and-trade program. In December 2007, CARB set the statewide 2020 emissions limit, defined as reducing emissions to 1990 levels, at 427 million metric tons of CO_2e ($MMTCO_2e$). The 2014 scoping plan adjusted the 1990 emissions estimate and the statewide 2020 emissions limit goal to 431 $MMTCO_2e$ (CARB 2014). The 2017 scoping plan (CARB 2017a) demonstrates the approach necessary to achieve California's 2030 target, which is to reduce GHG emissions 40 percent below 1990 levels to 260 $MMTCO_2e$. On November 16, 2022, CARB published the 2022 Scoping Plan for Achieving Carbon Neutrality (CARB 2022c), which lays out a path to achieve targets for carbon neutrality by 2045.

Mandatory Reporting of Greenhouse Gas Emissions. AB 32 also required CARB to adopt regulations to require the reporting and verification of statewide greenhouse gas emissions (Health and Safety Code, section 38530). CARB's Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (17 CCR §§95100 to 95163), which took effect January 2009, requires annual GHG emissions reporting from electric power entities, fuel suppliers, CO_2 suppliers, petroleum and natural gas system operators, and industrial facilities that emit at least 10,000 $MTCO_2e$/yr from stationary combustion and/or process sources. The project would not be impacted by this regulation because stationary source testing and maintenance combustion GHG emissions are expected to be below the reporting threshold of 10,000 $MTCO_2e$/yr, as shown in **Table 4.8-3**.

Cap-and-Trade Program. CARB's cap-and-trade program (Health and Safety Code, section 38562; 17 CCR §§95801 to 96022) took effect January 1, 2012. The cap-and-trade program establishes a declining limit on major sources of GHG emissions by sector throughout California, and it creates economic incentives for sources to invest in cleaner,

more efficient technologies. The current version of the regulation, effective April 2019, established the increasingly stringent compliance obligations for years 2021 to 2030. The cap-and-trade program applies to covered entities that fall within certain source categories, including first deliverers of electricity (such as fossil fuel power plants) and electrical distribution utilities; in this case, the project would obtain electrical service from PG&E. Covered entities in the cap-and-trade program, including PG&E, must hold compliance instruments sufficient to cover their actual GHG emissions, as set and verified through the CARB's Mandatory Reporting regulation. For the electricity supplied to the project from the grid, PG&E bears the GHG emissions compliance obligation under the cap-and-trade program for delivering electricity to the grid from its power plants and for making deliveries to end-users, such as the project, unless the project is otherwise a covered entity in the cap-and-trade program.

Executive Order B-30-15. On April 29, 2015, former Governor Brown issued Executive Order B-30-15, directing state agencies to implement measures to reduce GHG emissions 40 percent below their 1990 levels by 2030 and to make it possible to achieve the previously stated goal of an 80 percent GHG emissions reduction below 1990 GHG emissions by 2050 (CARB 2017a).

Statewide 2030 GHG Emissions Limit. On September 8, 2016, SB 32, codified as Health and Safety Code, section 38566, extended California's commitment to reduce GHG emissions by requiring the state to reduce statewide GHG emissions by 40 percent below 1990 levels by 2030 (CARB 2017a).

Other Key Programmatic Milestones

Renewable Energy Programs. In 2002, California initially established the RPS with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent by 2017. State energy agencies recommended accelerating that goal, and former Governor Schwarzenegger's Executive Order S-14-08 (November 2008) required California utilities to reach the 33 percent renewable electricity goal by 2020, consistent with the CARB's 2008 scoping plan. In April 2011, Senate Bill (SB) X1-2 of the First Extraordinary Session (SB X1-2) was signed into law. SB X1-2 expressly applied the 33 percent RPS by December 31, 2020, to all retail sellers of electricity and established renewable energy standards for interim years prior to 2020.

- **Senate Bill 350:** Beginning in 2016, SB 350 took effect as the Clean Energy and Pollution Reduction Act of 2015, declaring it the intent of the Legislature to acknowledge Governor Brown's clean energy, clean air and greenhouse gas emissions reduction goals for 2030 and beyond. SB 350 increases California's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030.
- **Senate Bill 100:** Beginning in 2019, the RPS deadlines advanced to 50 percent renewable resources by December 31, 2026, and 60 percent by December 31, 2030. In addition, SB 100 establishes policy that renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity by December 31, 2045.

- **Senate Bill 1020:** Accelerates the timelines set forth in SB 100 to provide that eligible renewable energy resources and zero-carbon resources supply 90 percent of all retail sales of electricity to California end-use customers by December 31, 2035, 95 percent of all retail sales of electricity to California end-use customers by December 31, 2040, 100 percent of all retail sales of electricity to California end-use customers by December 31, 2045, and 100 percent of electricity procured to serve all state agencies by December 31, 2035, as specified.

Short-Lived Climate Pollutant Strategy. To best support the reduction of GHG emissions consistent with AB 32, CARB released the Short-Lived Climate Pollutant (SLCP) Strategy, under Health and Safety Code, section 39730, in March 2017. Health and Safety Code, section 39730, defined SLCPs as having lifetimes in the atmosphere ranging from "a few days to a few decades." Then beginning in 2017 under Health and Safety Code, section 39730.5, CARB was directed to set targets to reduce SLCP emissions 40 percent below 2013 levels by 2030 for CH_4 and HFCs and 50 percent below 2013 levels by 2030 for anthropogenic black carbon (CARB 2017b). The SLCP Strategy was integrated into the 2017 update to CARB's scoping plan. To help meet the HFC reduction goal, California adopted HFC prohibitions and consolidated the California HFC prohibition regulation (previously Cal. Code Regs., tit. 17, §§ 95371-95377) and the statute (SB 1013, Health and Saf. Code § 39734) into one place. The current Cal. Code Regs., tit. 17, § 95375(c)(1) states that no person shall sell, lease, rent, install, use, or otherwise enter into commerce in the State of California any end-use equipment or product manufactured after the effective date that does not comply with Table 3 (which includes chillers) of section 95374(c) of the subarticle, with exceptions stated under Cal. Code Regs., tit. 17, § 95375(c)(2). In addition, on September 30, 2022, the Governor approved SB 1206, which would prohibit a person from offering for sale or distribution, or otherwise entering into commerce in the state, bulk HFCs or bulk blends containing HFCs that exceed a specified GWP limit beginning January 1, 2025, and lower GWP limits beginning January 1, 2030, and January 1, 2033. The bill does not restrict the authority of CARB to establish regulations lowering the maximum allowable GWP limits below the limits established by the bill.

Executive Order B-55-18. On September 10, 2018, the same day he signed SB 100 into law, former Governor Brown issued Executive Order B-55-18 to achieve carbon neutrality, stating the governor's intention "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter. This goal is in addition to the existing statewide targets of reducing greenhouse gas emissions." From the 2020 GHG limit of 431 $MMTCO_2e$, California will need to reduce statewide emissions another 170 million tons to meet its 2030 statutory target of 260 million tons per year (40 percent below 1990 levels). The state will need to cut annual emissions by a further 175 million tons to meet its 2050 goal (set by executive order) of 85 million tons per year (80 percent below 1990 levels).

Reducing SF_6 Emissions from Gas Insulated Switchgear. In early 2011, CARB adopted a regulation (17 CCR §§95350 to 95359) to reduce SF_6 emissions in gas insulated

switchgear (GIS) used in the electricity sector's transmission and distribution system as an early action measure pursuant to AB 32. SF_6 is an extremely powerful and long-lived GHG. The 100-year GWP of SF_6 is 22,800 (from IPCC Fourth Assessment Report), making it the most potent of the six main GHGs, according to the U.S. EPA. Because of its extremely high GWP, small reductions in SF_6 emissions can have a large impact on reducing GHG emissions, which are the main drivers of climate change. The regulation requires GIS owners to report SF_6 emissions annually and requires reductions of SF_6 emissions from GIS over time, setting an annual emission rate limit for each GIS owner. The maximum allowable emission rate started at 10 percent in 2011 and has decreased one percent per year since then. The limit reached one percent in 2020 and remained at that level going forward. However, data show that statewide SF_6 capacity is growing by one to five percent per year, which will increase the expected SF_6 emissions. In response to emerging technologies using lower or zero GWP insulators, CARB amended the regulation (Cal. Code Regs., tit. 17, §§ 95350-95359.1) in 2021 to further reduce GHG emissions from gas-insulated equipment (GIE [changed from GIS to include more devices beyond switchgear]). Key provisions of the amended regulation include a phase-out schedule in stages between 2025 and 2033 for new SF_6 GIE, coverage of other GHG beyond SF_6 used in GIE, and other changes that enhance accuracy of emissions accounting and reporting.

Assembly Bill 1279. Assembly Bill 1279 establishes the policy of the state to achieve carbon neutrality as soon as possible, but no later than 2045; to maintain net negative GHG emissions thereafter; and to ensure that by 2045 statewide anthropogenic GHG emissions are reduced at least 85 percent below 1990 levels. The bill requires CARB to ensure that Scoping Plan updates identify and recommend measures to achieve carbon neutrality, and to identify and implement policies and strategies that enable CO_2 removal solutions and carbon capture, utilization, and storage (CCUS) technologies. The CARB 2022 Scoping Plan for Achieving Carbon Neutrality (CARB 2022c) plans for the 2045 target set forth by Assembly Bill 1279 and Executive Order B-55-18.

Regional

2017 Bay Area Clean Air Plan. BAAQMD adopted the 2017 Bay Area Clean Air Plan on April 19, 2017 (BAAQMD 2017a). It provides a regional strategy to protect public health and protect the climate. To protect public health, the plan describes how BAAQMD will continue its progress toward attaining all state and federal ambient air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities. To protect the climate, the plan defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious GHG emissions reduction targets for 2030 and 2050 and provides a regional climate protection strategy that will put the Bay Area on a pathway to achieving those GHG emissions reduction targets.

BAAQMD CEQA Guidelines. The purpose of the BAAQMD CEQA Guidelines is to assist lead agencies in evaluating a project's impacts on air quality (BAAQMD 2017b). This document describes the criteria that BAAQMD uses when reviewing and commenting on

the adequacy of environmental documents. It recommends thresholds of significance for determining whether a project would have significant adverse environmental impacts, identifies methodologies for predicting project emissions and impacts, and identifies measures that can be used to avoid or reduce air quality impacts. The BAAQMD CEQA Guidelines include methodologies for estimating GHG emissions. In a comment letter on the Notice of Preparation for the EIR of a recent data center project (i.e. CA3 data center), BAAQMD indicated that the current recommended GHG thresholds in the BAAQMD 2017 CEQA Guidelines are based on the statewide 2020 GHG targets, which are now superseded by the statewide 2030 GHG targets established in Health and Safety Code, section 38566. BAAQMD recommended that the GHG analysis should evaluate the consistency of the project with California's 2030, 2045 and 2050 climate goals (BAAQMD 2021a). In November 2021, BAAQMD staff was in the process of preparing and presenting to the BAAQMD board for approval an update to the CEQA GHG threshold for stationary sources from the existing value of 10,000 $MTCO_2e/yr$ to 2,000 $MTCO_2e/yr$ or compliance with CARB's cap-and-trade program. However, the BAAQMD staff has paused work on the stationary source thresholds to focus on updating thresholds for land use projects and plans. After the project and plan level thresholds are adopted, which occurred in April 2022, BAAQMD staff will turn their attention to the stationary source threshold of significance and further investigate appropriate approaches.

Diesel Free by '33. In 2018, BAAQMD established a program intended to reduce GHG and criteria pollutant emissions by eliminating petroleum use by the end of 2033. Local Bay Area agencies are encouraged to voluntarily adopt the Statement of Purpose of this initiative. Entities signing the Statement of Purpose pledge to develop their own individual strategies to achieve the goal of reaching zero diesel emissions in their communities. Signatories to this agreement express their intent to:

1. Collaborate and coordinate on ordinances, policies, and procurement practices that will reduce diesel emissions to zero within their jurisdictions, communities, or companies;
2. Share and promote effective financing mechanisms domestically and internationally to the extent feasible that allow for the purchase of zero emissions equipment;
3. Share information and assessments regarding zero emissions technology;
4. Build capacity for action and technology adaptation through technology transfer and sharing expertise;
5. Use policies and incentives that assist the private sector as it moves to diesel-free fleets and buildings; and
6. Periodic reporting to all signers of progress towards the zero- diesel emissions goal.

Plan Bay Area 2040. Under the requirements of Senate Bill 375 (Chapter 728, Statutes of 2008), all metropolitan regions in California must complete a Sustainable Communities Strategy (SCS) as part of their Regional Transportation Plan. In the Bay Area, the Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) are jointly responsible for developing and adopting an SCS that integrates

transportation, land use, and housing to meet GHG emissions reduction targets set by CARB. In July 2017, the MTC and ABAG approved Plan Bay Area 2040, which is a strategic update to the previous plan approved in July 2013. The Bay Area GHG emissions reduction targets established by CARB in September 2010 include a seven percent reduction in GHG emissions per capita from passenger vehicles by 2020 compared to 2005 emissions. Similarly, Plan Bay Area 2040 includes a target to reduce GHG emissions per capita from passenger vehicles 15 percent by 2035 compared to 2005 emissions (MTC & ABAG 2017).

Local

City of San José General Plan. The City Council adopted the *Envision San José 2040 General Plan* (General Plan) in November 2011, with amendments published in December 2018, March 2020, and July 2022 (San José 2022b). Prior to developing this current General Plan, the City's Green Vision was adopted in October 2007, to steer economic growth while reducing GHG emissions through 2022. The General Plan includes a major strategy of "Measurable Sustainability" to incorporate and expand on the goals established earlier by the City's Green Vision (San José 2022b). The General Plan also provided the basis for the City's GHG Reduction Strategy.

Climate Smart San José. Climate Smart San José is a city-wide plan adopted by the City Council in February 2018 to promote urban sustainability. Climate Smart San José identified nine overarching strategies to promote sustainability through actions to "transition to a renewable energy future" and "improve our commercial building stock" (San José 2018). In November 2021, City Council set an aspirational goal of communitywide carbon neutrality by 2030, thereby accelerating Climate Smart. The proposed Pathway to Carbon Neutrality by 2030 (San José 2022a) was heard by City Council at the June 14, 2022 meeting.

City of San José GHG Reduction Strategy. The City of San José's 2030 GHG Reduction Strategy (GHGRS) is a comprehensive plan to achieve the City's share of statewide emissions reductions for 2030, as set forth by SB 32 (San José 2020), while meeting the mandates outlined in the BAAQMD's CEQA Guidelines. The City's first GHG Reduction Strategy was adopted in 2011 and amended in December 2015 (San José 2015). The City's 2030 GHGRS builds upon the prior strategies and the City's 2018 Climate Smart San José (San José 2018). The City's 2030 GHGRS follows the recommendations in the BAAQMD CEQA Guidelines and establishes a process for tiering and streamlining GHG analysis when the City acts as lead agency under CEQA. State CEQA Guidelines Section 15183.5 specifically allows lead agencies to analyze and mitigate GHG emissions through a plan for the reduction of GHG emissions, provided that the project complies with the requirements of the previously adopted plan or mitigation program.

City of San José Private Sector Green Building Policy (6-32). In October 2008, the City adopted the Private Sector Green Building Policy (6-32) that establishes baseline green building standards for private sector new construction and provides a framework for the implementation of these standards. This policy requires that applicable projects achieve minimum green building performance levels using the Council adopted standards.

The proposed project would be subject to this policy. Since the proposed commercial/industrial project would be greater than 25,000 square feet, the proposed data center buildings would be required to achieve LEED Silver certification, at minimum.

City of San José, Natural Gas Infrastructure Prohibition. To support the City of San José's GHGRS, on December 1, 2020, the San José City Council approved an ordinance, known as a building "reach code" (Ordinance No. 30502), to prohibit natural gas infrastructure in all new construction in San José, starting on August 1, 2021. The City Council determined that natural gas combustion and gas appliances emit a wide range of air pollutants that have been linked to various acute and chronic health effects, and adopted the ordinance to reduce greenhouse gas emissions, increase indoor air quality, and protect public health and safety. The ordinance provides an exception until December 31, 2024 for hospitals and for facilities with a distributed energy resource and a limited exemption for manufacturing and industrial facilities. The project is not proposing the use of natural gas at the site. Instead, the project would use electric heating (DayZenLLC 2022u).

Existing Conditions

California is a substantial contributor to global GHG emissions. The total gross California GHG emissions in 2019 were 404.5 $MMTCO_2e$ (CARB 2022a). The largest category of GHG emissions in California is transportation, followed by industrial activities and electricity generation in state and out of state (CARB 2022a). In 2020, the total gross California GHG emissions were 369.2 $MMTCO_2e$ (CARB 2022a). In 2019, the total gross U.S. greenhouse gas emissions were 6,571.7 $MMTCO_2e$, or 5,841.2 $MMTCO_2e$ after accounting for sequestration from the land sector (U.S. EPA 2022). The total gross U.S. greenhouse gas emissions in 2020 were 5,981.4 $MMTCO_2e$, or 5,222.4 $MMTCO_2e$ after accounting for sequestration from the land sector (U.S. EPA 2022). The sharp decline of GHG emissions in 2020 compared to 2019 was largely due to the impacts of the coronavirus (COVID-19) pandemic on travel and economic activity (CARB 2022a, U.S. EPA 2022).

The City of San José published a city-wide inventory of GHG emissions in 2019 (San José 2021), as shown in **Table 4.8-1**.

TABLE 4.8-1 CITY OF SAN JOSÉ 2019 GHG EMISSIONS INVENTORY

End-Use Sector	Percentage of Total (%)	Carbon Dioxide-Equivalent Emissions ($MTCO_2e$)
Transportation	51	2,795,791
Buildings (Natural Gas & Electricity)	34	1,850,231
Process and fugitive emissions	9	510,579
Solid Waste	5	298,733
Wastewater Treatment	0.4	22,285
Total	**100**	**5,477,619**

Source: San José 2021.

The carbon intensity of electricity supplied to all of California's customers is on a downward trend, primarily due to programs advancing the use and availability of

renewable energy. The mix of energy resources in the electricity supply changes from year to year. In general, the carbon intensity of PG&E's and California's electricity supply is on a long-term downward trend.

Depending on the customer type and size, PG&E offers a renewable energy content greater than the "Base Plan" mix through PG&E's "Solar Choice" program. For residential and commercial customers in the PG&E territory, enrolling PG&E's Solar Choice program provides the customer with a level of solar energy that exceeds the renewable energy mix in PG&E's default Base Plan. The PG&E Solar Choice program is available to businesses smaller than the proposed project having a peak load limited to 2 MW (PG&E 2022a). PG&E's Green Saver program will enable certain income-qualified residential customers in select communities to save 20 percent on their electricity bill by subscribing to 100 percent solar energy from solar projects built within California (PG&E 2022b).

The baseline mix of energy resources in the PG&E electricity supply including the Solar Choice and Green Saver options is shown in **Table 4.8-2**.

TABLE 4.8-2 COMPARISON OF THE MIX OF RESOURCES THAT MAKE UP THE ELECTRICITY SUPPLIED BY PG&E AND THE STATEWIDE POWER MIX – 2020

Energy Resources	PG&E Base Plan	PG&E 50% Solar Choice	PG&E 100% Solar Choice	PG&E Green Saver	California Power Mix
Renewable (Biomass & Biowaste, Geothermal, Eligible Hydroelectric, Solar, and Wind)	30.6%	65.3%	100.0%	100.0%	33.1%
Coal	0.0%	0.0%	0.0%	0.0%	2.7%
Large Hydroelectric	10.1%	5.1%	0.0%	0.0%	12.2%
Natural Gas	16.4%	8.2%	0.0%	0.0%	37.1%
Nuclear	42.8%	21.4%	0.0%	0.0%	9.3%
Other	0.0%	0.0%	0.0%	0.0%	0.2%
Unspecified sources of power (not traceable to specific sources)	0.0%	0.0%	0.0%	0.0%	5.4%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Source: 2020 Power Content Label for PG&E (CEC 2022)

4.8.3 Environmental Impacts

Methodology

The applicant estimated GHG emissions for demolition/construction from the demolition/construction equipment, vendor and hauling truck trips, and worker vehicle trips.

GHG emissions from the project operation are a result of diesel fuel combustion from the readiness testing and maintenance of the emergency backup generators, offsite vehicle trips for worker commutes and material deliveries, and facility upkeep (such as architectural coatings, consumer product use, landscaping, water use, waste generation, and electricity use).

a. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction

Less Than Significant Impact. Construction of the project would result in GHG emissions generated by the on-site operation of construction equipment, vendor and hauling truck trips, and worker trips[4]. The applicant estimated that these sources would generate maximum annual GHG emissions of approximately 967 $MTCO_2e$ (DayZenLLC 2021a, Table 4.3-6).

Because construction emissions would cease once construction is complete, these emissions are considered short term. The BAAQMD CEQA Guidelines do not identify a GHG emissions threshold for construction-related emissions. Instead, BAAQMD recommends that GHG emissions from construction be quantified and disclosed. BAAQMD further recommends the incorporation of BMPs to reduce GHG emissions during construction, as feasible and applicable. BMPs may include the use of alternative-fueled (for example, renewable diesel or electric) construction vehicles and equipment for at least 15 percent of the fleet, use of at least 10 percent of local building materials, and recycling or reusing at least 50 percent of construction waste (BAAQMD 2017b). The project would implement mitigation measure **AQ-1**, which would require, among other things, that the construction equipment be tuned and maintained in accordance with manufacturer's specifications and that construction equipment idling time be limited to five minutes to reduce GHG emissions from fuel consumed from unnecessary idling or the operation of poorly maintained equipment. The project would also exceed the city's construction and demolition waste diversion requirement (DayZenLLC 2021c), which would further reduce GHG emissions. The quantity of construction-related GHG emissions would be limited to the construction phase, which would ensure GHG impacts are less than significant.

Operation and Maintenance

Less Than Significant with Mitigation Incorporated. GHG emissions from project operation and maintenance would consist of direct "stationary source" emissions from routine readiness testing and maintenance of the emergency backup generators and indirect and "non-stationary source" emissions from offsite vehicle trips for worker commutes and

[4] The project description mentioned possible replacement of three or more existing transmission towers for transmission interconnection. Staff examined emissions for such replacement and determined that their impact would be negligible compared to other construction activities.

material deliveries, and facility upkeep, including architectural coatings, consumer product use, landscaping, water use, waste generation, and electricity use.

i. Direct Project Stationary Combustion Sources

The applicant has proposed to use renewable diesel as primary fuel or ultra-low sulfur diesel as secondary fuel for the emergency backup generators (DayZenLLC 2022n). As discussed in more detail in **Section 4.6 Energy and Energy Resources**, the current supply for both renewable diesel and ultra-low sulfur diesel is more than sufficient to meet the project's necessary demand. The available resource of renewable diesel would increase with more refineries coming online and more import supply. The applicant expects that most likely the readiness testing and maintenance would be done with renewable diesel because such refueling can be scheduled. However, during emergency operations, the applicant might need to use ultra-low sulfur diesel in the event of supply challenges or disruption in obtaining renewable diesel (CEC 2022j).

BAAQMD CEQA Guidelines indicates that biogenic CO_2 emissions would not be included in the quantification of GHG emissions for characterizing the CEQA impact significance for a project (BAAQMD2017b, page 4-5). Accordingly, with the use of 100 percent renewable diesel, the project's GHG emissions from routine readiness testing and maintenance of the emergency backup generators would be exempt from the stationary source threshold. Therefore, staff expects that the GHG emissions from the emergency backup generators for routine readiness testing and maintenance would be less than significant.

Despite the exemption from the stationary source threshold, staff performed a quantitative estimation of the GHG emissions from readiness testing and maintenance of the emergency backup generators. Staff concludes that it is reasonable to expect that all the readiness testing and maintenance would be done with renewable diesel. Staff assumed 50 hours of annual testing and maintenance at 100 percent load for a conservative analysis.

CARB's 2021 testing report shows that renewable diesel used in place of ultra-low sulfur petroleum-based diesel can only reduce CO_2 tailpipe emissions approximately 3 to 4 percent (CARB 2021). However, renewable diesel is produced with a fuel-cycle that is a far lower carbon intensity (CI) than ultra-low sulfur petroleum-based diesel. **Table D-2** in **Appendix D** of this EIR shows that there are 61 to 83 percent reduction in CI values using renewable diesel from various feedstocks in place of ultra-low sulfur petroleum-based diesel. Since the impacts analysis of GHG emissions is global in nature, staff computed the fuel-cycle GHG emissions of the emergency backup generators. Based on average CI data for the last five years (3rd Quarter 2017 through 2nd Quarter 2022) and energy densities of renewable diesel and ultra-low sulfur petroleum-based diesel reported to CARB's Low-Carbon Fuel Standard program (CARB 2022b), staff calculated that the GHG emission factor (in terms of $MTCO_2e$/gallon) would reduce about 67 percent using renewable diesel compared to ultra-low sulfur petroleum-based diesel. With the assumption of additional 3 percent tailpipe CO_2 emissions reduction, the total fuel-cycle GHG reduction would be about 68 percent using renewable diesel compared to ultra-low

sulfur petroleum-based diesel. The applicant estimated the GHG emissions of about 3,963 $MTCO_2e$/yr (i.e. 4,368 [=4,246.8+121.5] tons/year [DayZenLLC 2022q]) from the proposed engines if ultra-low sulfur petroleum-based diesel is used. With the 68 percent reduction in GHG emissions using 100 percent renewable diesel in place of ultra-low sulfur petroleum-based diesel, staff calculated the fuel-cycle GHG emissions of the proposed engines during readiness testing and maintenance to be 1,261 $MTCO_2e$/yr.

Table 4.8-3 shows the maximum annual fuel-cycle GHG emission expected for the emergency backup generators routine readiness testing and maintenance with renewable diesel. The emissions are conservatively estimated based on 50 hours of annual testing and maintenance at 100 percent load per engine.

TABLE 4.8-3 FUEL-CYCLE GREENHOUSE GAS EMISSIONS FROM EMERGENCY BACKUP GENERATORS TESTING AND MAINTENANCE WITH RENEWABLE DIESEL

Source	Maximum Annual Fuel-Cycle Emissions ($MTCO_2e$/yr)
Emergency backup generators – Testing and Maintenance	1,261 [a]
Proposed Future BAAQMD Threshold	2,000
Exceeds Threshold?	No

Source: DayZenLLC 2022q, CEC staff analysis

Note: [a] The applicant estimated the GHG emissions of about 3,963 $MTCO_2e$/yr (i.e. 4,368 [=4,246.8+121.5] tons/year [DayZenLLC 2022q]) from the proposed engines if ultra-low sulfur petroleum-based diesel is used. As discussed in the text above, with the 68 percent reduction in GHG emissions using renewable diesel in place of ultra-low sulfur petroleum-based diesel, staff calculated the fuel-cycle GHG emissions of the proposed engines to be 1,261 $MTCO_2e$/yr.

Table 4.8-3 shows that the estimated annual fuel-cycle GHG emissions from the project's stationary sources, the emergency backup generators, for routine readiness testing and maintenance would be well below the existing BAAQMD CEQA Guidelines GHG emissions significance threshold of 10,000 $MTCO_2e$/yr for stationary sources and would not exceed the threshold level for inclusion in CARB's cap-and-trade program, which is 25,000 $MTCO_2e$/yr. In addition, as mentioned above, in November 2021, BAAQMD staff was in the process of preparing and presenting to the BAAQMD board for approval an update to the CEQA GHG threshold for stationary sources from 10,000 $MTCO_2e$/yr to 2,000 $MTCO_2e$/yr or compliance with CARB's cap-and-trade program. With the use of 100 percent renewable diesel, the fuel-cycle GHG emissions from the emergency backup generators for routine readiness testing and maintenance would also be lower than 2,000 $MTCO_2e$/yr.

The project's likelihood of operating the emergency backup generators for unplanned circumstances or emergency purposes is low and, if such operation did occur, it would be infrequent and of short duration. As discussed in more detail in **Appendix B**, the analysis of BAAQMD's review of diesel engine use shows that the overall number of hours of operation for the facilities in the review that did run (which was less than half of them) was 0.07 percent of the available time over the 13-month period, which included the rare heat storm events in 2020 and is the only period for which data are available to staff.

The average runtime for each event in BAAQMD's review was approximately 5.0 hours. Staff concludes the GHG emissions of the emergency backup generators during unplanned circumstances or emergency purposes would not add significantly to the GHG emissions estimated for readiness testing and maintenance. Additionally, the GHG emissions during the routine operation of the emergency backup generators are overestimated with 50 hours of readiness testing and maintenance per year per engine. Project applicants previously stated that routine readiness testing and maintenance would rarely exceed 12 hours per year. The emergency operation of the emergency backup generators is expected to be infrequent and of short duration. It would be speculative to estimate that the project would engage in emergency operation averaging over 38 (= 50-12) hours per year. As discussed in more detail in **Appendix B**, the analysis of BAAQMD's review of diesel engine use shows that average engine ran no more than 36.5 hours over the 13-month period, which included the rare heat storm events in 2020. Staff expects diesel engine use during normal years would be much less than 36.5 hours. Thus, 50 hours of emergency backup generator operation per year is an appropriate estimate of operational time to accommodate both readiness testing and maintenance and emergency operation for any given year, even if ultra-low sulfur diesel is used during short emergency operation durations in the event of supply challenges or disruption in obtaining renewable diesel.

Staff recommends mitigation measure **GHG-1** to ensure the applicant would use renewable diesel for 100 percent of total energy use by the emergency backup generators, and only use ultra-low sulfur diesel as a secondary fuel in the event of supply challenges or disruption in obtaining renewable diesel. The City of San José Planning, Building and Code Enforcement (PBCE) may grant temporary relief from the 100 percent renewable diesel requirement if the applicant can demonstrate a good faith effort to comply with the requirement and that compliance is not practical. The project owner shall perform any source test of the emergency backup generators using renewable diesel if required by the BAAQMD.

With the implementation of **GHG-1**, the environmental impact of GHG emissions from the project's stationary sources would be less than significant. In addition, as discussed below, with the implementation of **GHG-1**, the project's stationary sources would not conflict with plans, policies, or regulations adopted to achieve long-term GHG emissions reduction goals.

ii. Indirect and Non-Stationary Sources Emissions

Maximum GHG emissions from indirect and non-stationary sources (i.e. energy use, mobile sources and building operation) are provided in **Table 4.8-4**.

Project Electricity Usage. Table 4.8-4 shows the indirect GHG emissions attributed to electricity use. The primary function of the project is to house computer servers, which require electricity and cooling 24 hours a day to operate. Annual GHG emissions associated with electricity usage are the product of the maximum estimated annual electricity usage and the utility-specific carbon intensity factor, which depends on the

utility's portfolio of power generation sources. The projected maximum electricity demand for the project is 93 MW including both the data center and the Advanced Manufacturing building (AMB) (DayZenLLC 2022k, DayZenLLC 2022u). Staff estimates that the worst-case energy use from the project's activities would be up to 814,680 MWh/year (= 93 MW × 8,760 hours/year). Actual electricity usage in any year would be lower than this level.

Electricity for the project would be provided by PG&E, although the applicant has the option of choosing the mix of energy resources in the electricity supply by purchasing energy from either PG&E or San Jose Clean Energy (SJCE).

The applicant proposes to purchase electricity from SJCE instead of PG&E (DayZenLLC 2021c). The city of San José's Community Energy Department operates SJCE as a Community Choice Aggregator to procure electricity with a lower carbon intensity than PG&E's mix. As of April 21, 2022, SJCE has achieved a 95 percent carbon-free electricity mix through their use of solar, wind, and hydroelectric power, and is the cleanest electricity mix out of the ten largest cities in the country. Renewable sources like solar and wind comprise 60 percent of SJCE's power mix, up from 45 percent offered by SJCE in 2019. GreenSource, SJCE's standard service option, is currently sourced at 60 percent from renewable energy (SJCE 2022). The Total Green mix is 100 percent renewable.

The applicant conservatively used PG&E's 2018 carbon intensity factor of 206 lbs CO_2e/MWh to calculate the GHG emissions due to electricity usage. However, as mentioned above, PG&E's carbon intensity factor for electricity generation is on a long-term downward trend and will continue to change as PG&E's power mix continues to increase the percentage of electricity obtained from renewable resources. PG&E's carbon intensity factor has decreased to 160 lbs CO_2e/MWh for the default Base Plan, 80 lbs CO_2e/MWh for 50% Solar Choice, and 0 lbs CO_2e/MWh for 100% Solar Choice and Green Saver in 2020 (CEC 2022). Because the applicant has options in the choice of electricity supply, for a conservative calculation, staff assumes that the project could purchase electricity at the PG&E's default Base Plan with the carbon intensity of 160 lbs CO_2e/MWh for 2020, the most recent year for which data are available.

Table 4.8-4 shows that, with the carbon intensity value of 160 lbs CO_2/MWh, the worst-case GHG emissions due to electricity use would be about 59,125 MTCO_2e/yr. However, as discussed in more detail below, the applicant proposes to participate in the SJCE at the Total Green level (i.e., 100 percent carbon-free electricity) for electricity accounts associated with the project, or enter into an electricity contract with SJCE or participate in a clean energy program that accomplishes the same goals of 100 percent carbon-free electricity as the SJCE Total Green Level. Staff proposes to incorporate this applicant proposed mitigation measure as **GHG-2**. With the implementation of mitigation measure **GHG-2**, the project's electricity use would not impede the attainment of the state's GHG emissions reduction goals.

Project Mobile Emissions Sources. The applicant estimated these emissions based on a total of 218 (=167 for SV05, AMB, and parking garage + 51 for SV06) trips per day from project operations (DayZenLLC 2021d). However, in the revised project description (DayZenLLC 2022n), the applicant updated the employment for the AMB from 128 to 269. Staff updated the total trip numbers in CalEEMod according to this change. **Table 4.8-4** shows staff's estimated annual GHG emissions from mobile emissions sources.

Project Water Consumption and Waste Generation. Table 4.8-4 shows the estimated annual GHG emissions from water consumption and waste generation. Water consumption results in indirect emissions from electricity usage for water conveyance and wastewater treatment. Daily operations at the project would also generate solid waste, which results in fugitive GHG emissions during waste decomposition at the landfill.

Refrigerant Use. The project would use refrigerants in air-cooled chillers with integral economization, variable flow refrigerant compression, and variable flow condenser fans located on the roof (DayZenLLC 2022f). The refrigerant used in the air-cooled chillers proposed would be R-513a. The applicant estimates a 0.5 percent annual refrigerant loss a year. Each chiller unit is charged with 750 lbs of R-513a. The applicant estimated a total of 292.5 lbs of refrigerant would be lost in a year for all (78) of the chiller units for the whole project. Since R-513a has a GWP of 573, the project would create about 76 $MTCO_2e$ into the atmosphere due to refrigerant loss (DayZenLLC 2022u).

Sulfur Hexafluoride Leakage. SF_6 would be used in the proposed breakers. Each breaker would contain approximately 25 lbs of SF_6, for a total of 50 lbs. With a conservative and reasonable leak rate of 0.5%, the applicant estimated the emissions of SF_6 to be 0.25 lbs/yr, which would be equivalent to about 2.7 $MTCO_2e$/yr (DayZenLLC 2022f).

TABLE 4.8-4. MAXIMUM GHG EMISSIONS FROM ENERGY USE, MOBILE SOURCES, AND BUILDING OPERATION DURING PROJECT OPERATION

Source	Annual Emissions ($MTCO_2e$/yr)
Energy Use [a]	59,125
Area Sources [b]	0.016
Mobile Sources [c]	264.4
Waste Disposed [c]	197.1
Water Use	8.6
Cooling System Refrigerant Leakage [d]	76.0
Sulfur Hexafluoride (SF_6) Leakage	2.7
Total	59,674

Sources: DayZenLLC 2021d, DayZenLLC 2022f, DayZenLLC 2022n, DayZenLLC 2022u, CEC staff analysis.

Notes:

[a] Based on PG&E carbon intensity factor of 160 lbs of CO_2 per MWh for 2020 (CEC 2022). CEC staff assumed the worst-case electricity use of 814,680 MWh/year after full build-out.

[b] Staff calculation based on CalEEMod default emission factors for General Office Building land uses applied to a total of 833,518 square foot area including the data center buildings (SV05 and SV06), AMB, and parking garage (DayZenLLC 2022f, response to DR #34).

[c] Staff calculation based on updated employee information in the revised project description (DayZenLLC 2022n).
[d] The applicant estimated GHG emissions from refrigerant leakage based on the leakage rate of 0.5 percent per year (DayZenLLC 2022u) and a GWP of 573 for R-513a. The regulatory leakage rate limit would be 10 percent per year, which would increase the maximum allowable GHG annual emissions twentyfold to 1,520 $MTCO_2e$.

Summary of Indirect and Non-stationary GHG Emissions. As shown in **Table 4.8-4**, operation of the project is estimated to generate 59,674 $MTCO_2e$/yr from maximum possible electricity use and other non-stationary sources. The emissions from the maximum possible rate of electricity use is estimated to be 59,125 $MTCO_2e$/yr; however, this does not include efficiency measures that would be pursued as part of the project, nor does it reflect implementation of state and local measures to reduce GHG emissions associated with electricity production and California's fuels. For example, programs to implement SB 350 and SB 100 would continue to promote renewable resources in the power mix and ensure the ongoing substantial reductions in GHG emissions from electricity generation. In addition, with the implementation of mitigation measure **GHG-2**, the project would use 100 percent carbon-free electricity either by participation in the SJCE at the Total Green level or enter into an electricity contract with SJCE or participate in a clean energy program that accomplishes the same goals of 100 percent carbon-free electricity as the SJCE Total Green Level. Therefore, with the implementation of mitigation measure **GHG-2**, the GHG impacts from the project's electricity use would be less than significant.

Conclusion

Less Than Significant with Mitigation Incorporated. The mitigation elements contained in **GHG-1** and **GHG-2** ensure the total emission profile of the project remains less than significant.

With the use of 100 percent renewable diesel, the project's GHG emissions from readiness testing and maintenance of the emergency backup generators would be exempt from the stationary source threshold. Despite the exemption, staff estimated the project's fuel-cycle GHG emissions from the annual readiness testing and maintenance of the emergency backup generators using renewable diesel and concludes that these emissions would be estimated at 1,261 $MTCO_2e$/yr as shown in **Table 4.8-3**, which is below the existing BAAQMD CEQA Guidelines threshold of significance of 10,000 $MTCO_2e$/yr, which was based on 2020 GHG reduction goals. The fuel-cycle GHG emissions from the emergency backup generators would also be lower than 2,000 $MTCO_2e$/yr, which has been proposed by the BAAQMD staff as an updated GHG threshold of significance based on 2030 and 2045 GHG reduction goals. However, the BAAQMD has not finalized the proposed, updated GHG threshold of significance for stationary sources. Therefore, in this analysis, staff evaluates the GHG impacts of the emergency backup generators against both the existing threshold and the proposed threshold.

Staff proposes mitigation measure **GHG-1** which ensures the applicant would use renewable diesel for 100 percent of total energy use by the emergency backup generators, and only use ultra-low sulfur diesel as a secondary fuel in the event of supply challenges or disruption in obtaining renewable diesel. The City of San José PBCE may grant temporary relief from the 100 percent renewable diesel requirement if the applicant can demonstrate a good faith effort to comply with the requirement and that compliance is not practical. With this measure, the project's direct GHG emissions from stationary sources would not have a significant direct or indirect impact on the environment. With **GHG-1**, the operation of the emergency backup generators would not hinder California's efforts to achieve the statewide 2045 GHG emissions reduction goal.

As discussed below, with the implementation of **GHG-2** and other proposed design measures, the GHG emissions from the project's energy usage, mobile sources, and building operation would occur in a manner consistent with the city's 2030 GHGRS and the policies reflected in Executive Order B-55-18, CARB's scoping plan, and later programs to implement SB 350 and SB 100 to achieve the statewide 2030 and other future GHG emissions reduction targets. These categories of GHG emissions would not result in a "cumulatively considerable" contribution under CEQA because they would conform with all applicable plans, policies, and regulations adopted for the purpose of GHG emissions reductions, as discussed further in "b" below. In addition, under the BAAQMD's 2022 CEQA thresholds of significance for land use projects "option B", GHG impacts from indirect and non-stationary emissions sources of the project would be considered to have a less-than-significant impact since the project is consistent with the city's 2030 GHGRS. Therefore, the maximum potential rate of GHG emissions from the project's energy usage, mobile sources, and building operation are determined to have less-than-significant GHG impacts.

The majority of the project's operational GHG emissions would occur from electricity use or during the readiness testing and maintenance of the emergency backup generators. The project's likelihood of operating for unplanned circumstances or emergency purposes is low and if such operation did occur it would be infrequent and of short duration. Staff concludes that 50 hours of emergency backup generator operation per year should be enough to accommodate both readiness testing and maintenance and emergency operation for any given year, even if ultra-low sulfur diesel is used during short emergency operation durations in the event of supply challenges or disruption in obtaining renewable diesel. Staff, therefore, concludes that GHG emissions during emergency operation would be less than significant.

b. Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Construction

Less Than Significant Impact. The project's short-term demolition and construction GHG emissions would not interfere with the state's ability to achieve long-term GHG emissions reduction goals. As mentioned above, the project would implement BMPs, as specified in mitigation measure **AQ-1**, that would reduce construction-related GHG emissions. The project would also exceed the city's construction and demolition waste diversion requirement (DayZenLLC 2021c), which would further reduce GHG emissions and be consistent with the Zero Waste Goal of the city's 2030 GHGRS. The vehicles and fuel supplies used during demolition and construction of the project are required to comply with the applicable GHG reduction programs for mobile sources and suppliers of transportation fuels. The project would conform to relevant programs and recommended actions detailed in CARB's scoping plan. Similarly, the project components would not conflict with regulations adopted to achieve the goals of CARB's scoping plan.

Operation and Maintenance

Less Than Significant with Mitigation Incorporated. The project's GHG emissions related to operation and maintenance would be caused by the combustion of diesel fuel in the emergency backup generator engines and other routine operational activities (including energy use, mobile sources, and building operation).

i. Direct Project Stationary Combustion Sources

The direct project stationary combustion sources are the emergency backup generator engines.

State Plans, Policies, and Regulations

As discussed under Regulatory Background above, California has set ambitious 2030, 2045, and 2050 GHG emissions reduction goals. Because of these goals, staff concludes it is imperative that the identified methods of carbon reduction contained in **GHG-1** and **GHG-2** be employed to ensure the project's GHG emissions are less than significant.

SB 100 established a landmark policy requiring renewable energy and zero-carbon resources supply 100 percent of electric retail sales to end-use customers by 2045. While the project is not directly required to comply with the SB 100 provisions, it is technically a generator of electricity and, therefore, it is reasonable to apply the GHG emissions reduction goal to the project. Staff recommends mitigation measure **GHG-1** to ensure the applicant would use renewable diesel for 100 percent of total energy use by the emergency backup generators, and only use ultra-low sulfur diesel as a secondary fuel in the event of supply challenges or disruption in obtaining renewable diesel. The City of San José PBCE may grant temporary relief from the 100 percent renewable diesel

requirement if the applicant can demonstrate a good faith effort to comply with the requirement and that compliance is not practical. The mitigation would also require annually reporting the status of procuring and using renewable diesel. With **GHG-1**, the project's stationary sources would use renewable diesel to ensure that the operation of the emergency backup generators would not hinder California's efforts to achieve the statewide 2045 GHG emissions reduction goal.

Regional Plans, Policies, and Regulations

Bay Area 2017 Clean Air Plan. With **GHG-1**, the direct project stationary combustion sources (i.e. emergency backup generator engines) would also be consistent with BAAQMD's Bay Area 2017 Clean Air Plan measure to Decarbonize Electricity Generation (EN1).

Diesel Free by '33. In 2018, the Mayor of San José personally became a signatory to the BAAQMD's Diesel Free by '33 initiative. However, the CEC has concluded that Diesel Free by '33 is not an appliable GHG emissions reduction strategy, program or law that facilities must comply with. Nevertheless, it is a regional goal to reduce petroleum-based diesel fuel emissions in communities.

Renewable diesel is currently used mostly as a transportation fuel. There are both federal (CEC 2020) and state incentives that offset the increased cost of renewable diesel compared to petroleum-based diesel when used in transportation applications. However, staff is unaware of any incentives that would apply to stationary sources, including the project. Staff proposes mitigation measure **GHG-1** to require the applicant to use renewable diesel for 100 percent of total energy use by the emergency backup generators, and only use ultra-low sulfur diesel as a secondary fuel in the event of supply challenges or disruption in obtaining renewable diesel.

Local Plans, Policies, and Regulations

City of San José General Plan. Energy Conservation and Renewable Energy Use policy MS-2.1 of the city's General Plan requires the city to develop and maintain policies, zoning regulations, and guidelines that require energy conservation and use of renewable energy sources. Staff proposes mitigation measure **GHG-1** to require the applicant to use renewable diesel for 100 percent of total energy use by the emergency backup generators, and only use ultra-low sulfur diesel as a secondary fuel in the event of supply challenges or disruption in obtaining renewable diesel. The project would be consistent with the Energy Conservation and Renewable Energy Use policy MS-2.1 of the city's General Plan.

ii. Indirect and Non-Stationary Sources Emissions

The project's indirect and non-stationary sources emissions include those from energy use, mobile sources and building operation.

State Plans, Policies, and Regulations

The project's GHG emissions are predominantly from electricity usage. Multiple measures contained in CARB's scoping plan address GHG emissions from energy use. For example, CARB's cap-and-trade program, through the regulation of upstream electricity producers, will account for GHG emissions in the project's power mix and requires these emissions to be reduced by the amount needed to achieve the statewide 2030 GHG emissions reduction goal. Electricity sources and suppliers used by the project must comply with the RPS and cap-and-trade program requirements. This, however, is not to say that new large consumers of electricity should not also be responsible for the GHG emissions resulting from their electricity use.

While all electricity supplied to the project by PG&E or SJCE would be subject to the RPS requirements promulgated under SB 100, staff concludes that because the project would present such a large, single potential increase in load (up to 93 MW at full build out), it is not sufficient to point to PG&E or SJCE's compliance to conclude the project's indirect emissions from electricity use are less than significant. The more electricity demand added to the grid, the harder it becomes to meet long-term GHG emissions reduction goals. Transmission resources are not infinite, and renewable imports are increasingly being taken as other states establish their own GHG emissions reduction goals. Adding renewable generation, while obviously preferable to fossil-fueled generation, is not without its own potential environmental impacts, and asking all customers of a load serving entity to share in the costs of greening additional demand brought on by large commercial customers raises equity concerns. Numerous data centers, many with just under 100 MW loads, are being proposed in PG&E and SVP territories, with several already under construction or about to start. Without a requirement that these data center facilities bear responsibility for ensuring that their electricity use would not impede the attainment of the state's GHG emissions reduction goals, including SB 100, it is unclear how the state is going to make the increasingly steep reductions needed to avert the most catastrophic climate change scenarios. The applicant proposes to participate in the SJCE at the Total Green level (i.e., 100 percent carbon-free electricity) for electricity accounts associated with the project, or enter into an electricity contract with SJCE or participate in a clean energy program that accomplishes the same goals of 100 percent carbon-free electricity as the SJCE Total Green Level. Staff proposes to incorporate this applicant proposed mitigation measure as **GHG-2**. With the implementation of mitigation measure **GHG-2**, the project would not impede the attainment of the state's GHG emissions reduction goals.

Other project activities, such as mobile sources and building operation, would be similar to those of other commercial or industrial projects subject to development review by the city of San José. The project would be built in accordance with Title 24 and CALGreen and would include green building measures to reduce energy consumption.

The applicant would use a low GWP refrigerant, R-513a, in the air-cooled chillers (DayZenLLC 2022u). The use of the proposed low GWP refrigerant would be allowed under the HFC prohibition regulation and the HFC sale and distribution prohibition (SB 1206).

The applicant would purchase the SF_6 GIE (breakers) by January 1, 2023 and it would enter California prior to January 1, 2025, which is the applicable phase-out date for the proposed SF_6 GIE (DayZenLLC 2022k). Therefore, the applicant would be able to use SF_6 GIE under Cal. Code Regs., tit. 17, §95352(a)(3).

With **GHG-2**, the operation of the project would not conflict with regulations adopted to achieve the goals of the scoping plan. Accordingly, the project's operational activities would not interfere with the state's ability to achieve long-term GHG emissions reduction goals.

Regional Plans, Policies, and Regulations

Bay Area 2017 Clean Air Plan. The Bay Area 2017 Clean Air Plan (BAAQMD 2017a) includes performance objectives, consistent with the state's climate protection goals under AB 32 and SB 375, designed to reduce GHG emissions to 1990 levels by 2030 and 80 percent below 1990 levels by 2050. Due to the relatively high project electrical demand, energy efficiency measures are included in the design and operation of the onsite electrical and mechanical systems. This would be consistent with the general purpose of Energy and Climate Measure (ECM)-1 – Energy Efficiency in BAAQMD's Bay Area 2017 Clean Air Plan. Staff also recommends mitigation measure **GHG-2** to require the project applicant to participate in the SJCE at the Total Green level for electricity accounts associated with the project, or enter into an electricity contract with SJCE or participate in a clean energy program that accomplishes the same goals of 100 percent carbon-free electricity as the SJCE Total Green Level. These features would be consistent with BAAQMD's Bay Area 2017 Clean Air Plan measure to Decarbonize Electricity Generation (EN1).

BAAQMD CEQA Thresholds of Significance. Under the BAAQMD's 2022 CEQA thresholds of significance for land use projects, a CEQA lead agency can conclude that a project will not make a cumulatively considerable contribution to global climate change if the project is designed and built to be consistent with the applicable local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b) (as "option B" on p.2 of BAAQMD's 2022 Justification Report [BAAQMD 2022]). As discussed below, the project would be consistent with the city of San José's 2030 GHGRS, which meets the criteria under State CEQA Guidelines Section 15183.5(b). Therefore, GHG impacts from indirect and non-stationary emissions sources of the project would be less than significant.

Plan Bay Area 2040/SB 375. MTC and ABAG developed an SCS with the adopted Plan Bay Area 2040 to achieve the Bay Area's regional GHG emissions reduction target. Plan Bay Area 2040 sets a 15 percent GHG emissions reduction per capita target from passenger vehicles by 2035 when compared to the project 2005 emissions. However, these emission reduction targets are intended for land use and transportation strategies only. The project would be required implement a Transportation Demand Management (TDM) program to reduce vehicle trips and vehicle miles travelled (VMT) and would not contribute to a substantial increase in passenger vehicle travel within the region.

Local Plans, Policies, and Regulations

San José GHG Reduction Strategy. The applicant would apply for building permits from the city of San José. For commercial or industrial projects subject to development review by the city of San José, the city's 2030 GHGRS presents the city's comprehensive path to reduce GHG emissions to achieve the 2030 reduction target, based on the goals set forth with SB 32 and BAAQMD CEQA Guidelines. Additionally, the 2030 GHGRS leverages other important city plans and policies, including the General Plan, Climate Smart San José, and the City Municipal Code in identifying reductions strategies that achieve the city's target. The city of San José's 2030 GHGRS represents San José's qualified climate action plan for the city's implementation of CEQA (San José 2020).

The applicant would incorporate measures from the city's 2030 GHGRS, as specified by the city during the design review process to ensure compliance with applicable laws, ordinances, regulations, and standards. Conformance with the applicable design codes and policies will be enforced during the city design review process.

Consistency of the project with the City's 2030 GHGRS (San José 2020) is discussed in **Table 4.8-5**.

TABLE 4.8-5 PROJECT COMPLIANCE WITH CITY OF SAN JOSÉ 2030 GHG REDUCTION STRATEGY

Emission Reduction Policies	Project Compliance
General Plan Policy Consistency	
1) Consistency with the Land Use/ Transportation Diagram (Land Use and Density).	Yes. The applicant applied for a rezoning from Industrial Park to Transit Employment Center (Planned Development) per city's recommendation. With the proposed rezoning and implementation of the proposed development standards, the project would be consistent with the General Plan and Municipal Code (DayZenLLC 2022k, DayZenLLC 2022s).
2)Implementation of Green Building Measures	
MS-2.2: Encourage maximized use of on-site generation of renewable energy for all new and existing buildings.	Not applicable. With implementation of **GHG-2**, the project owner will participate in the SJCE at the Total Green Level (i.e., 100 percent carbon-free electricity) for electricity accounts associated with the project, or enter into an electricity contract with SJCE or participate in a clean energy program that accomplishes the same goals of 100 percent carbon-free electricity as the SJCE Total Green Level. Besides, with implementation of **GHG-1**, the applicant would use renewable diesel for 100 percent of total energy use by the emergency backup generators, and only use ultra-low sulfur diesel as a secondary fuel in the event of supply challenges or disruption in obtaining renewable diesel. As a result, onsite renewable energy generation is not needed to offset the project's emissions.
MS-2.3: Utilize solar orientation (i.e., building placement), landscaping, design, and construction techniques for new	Yes. Unlike typical structures, such as the proposed advanced manufacturing building which will utilize windows to take advantage of sun exposure to reduce energy consumption, one of the primary concerns of data

TABLE 4.8-5 PROJECT COMPLIANCE WITH CITY OF SAN JOSÉ 2030 GHG REDUCTION STRATEGY

Emission Reduction Policies	Project Compliance
construction to minimize energy consumption.	center structures is interior cooling. As a result, the data center buildings are designed with minimal windows and sun exposure to the data hall areas to reduce energy consumption associated with cooling.
MS-2.7: Encourage the installation of solar panels or other clean energy power generation sources over parking areas.	No. Due to site constraints and city parking requirements, it is not feasible to include solar panels on the roof of the proposed parking garage as it would reduce the number of parking spaces below the required level. Furthermore, with implementation of **GHG-2**, the project owner will participate in the SJCE at the Total Green Level (i.e., 100 percent carbon-free electricity) for electricity accounts associated with the project, or enter into an electricity contract with SJCE or participate in a clean energy program that accomplishes the same goals of 100 percent carbon-free electricity as the SJCE Total Green Level. Besides, with implementation of **GHG-1**, the applicant would use renewable diesel for 100 percent of total energy use by the emergency backup generators, and only use ultra-low sulfur diesel as a secondary fuel in the event of supply challenges or disruption in obtaining renewable diesel. As a result, onsite renewable energy generation is not needed to offset the project's emissions.
MS-2.11: Require new development to incorporate green building practices, including those required by the Green Building Ordinance. Specifically, target reduced energy use through construction techniques (e.g., design of building envelopes and systems to maximize energy performance), through architectural design (e.g., design to maximize cross ventilation and interior daylight) and through site design techniques (e.g., orienting buildings on sites to maximize the effectiveness of passive solar design).	Yes. The project would be built in accordance with Title 24 and CALGreen, and would include green building measures to reduce energy consumption. The project would also utilize lighting control to reduce energy usage for new exterior lighting and air economization for building cooling. Water efficient landscaping and ultralow flow plumbing fixtures in the buildings would be implemented to limit water consumption.
MS-16.2: Promote neighborhood-based distributed clean/renewable energy generation to improve local energy security and to reduce the amount of energy wasted in transmitting electricity over long distances.	Not applicable. Furthermore, with implementation of **GHG-2**, the project owner will participate in the SJCE at the Total Green Level (i.e., 100 percent carbon-free electricity) for electricity accounts associated with the project, or enter into an electricity contract with SJCE or participate in a clean energy program that accomplishes the same goals of 100 percent carbon-free electricity as the SJCE Total Green Level. Besides, with implementation of **GHG-1**, the applicant would use renewable diesel for 100 percent of total energy use by the emergency backup generators, and only use ultra-low sulfur diesel as a secondary fuel in the event of supply challenges or disruption in obtaining renewable diesel. As a result,

TABLE 4.8-5 PROJECT COMPLIANCE WITH CITY OF SAN JOSÉ 2030 GHG REDUCTION STRATEGY

Emission Reduction Policies	Project Compliance
	onsite renewable energy generation is not needed to offset the project's emissions.
3) Pedestrian, Bicycle & Transit Site Design Measures	
CD-2.1: Promote the Circulation Goals and Policies in the *Envision San José 2040 General Plan*. Create streets that promote pedestrian and bicycle transportation by following applicable goals and policies in the Circulation section of the *Envision San José 2040 General Plan*.	Yes. The project will replace the existing sidewalks along the Ringwood Avenue and Trade Zone Boulevard frontages of the site. To enhance walkability, the project would install a landscape buffer between the sidewalk and Trade Zone Boulevard. There are existing buffered bike lanes along the site's Ringwood Avenue and Trade Zone Boulevard frontages which allow bike access to the Milpitas BART station. No other street improvements are required by the project.
CD-2.5: Integrate Green Building Goals and Policies of the *Envision San José 2040 General Plan* into site design to create healthful environments. Consider factors such as shaded parking areas, pedestrian connections, minimization of impervious surfaces, incorporation of stormwater treatment measures, appropriate building orientations, etc.	Yes. The project would be built in accordance with Title 24 and CALGreen and would include green building measures to reduce energy consumption. Stormwater treatment is implemented in various locations to treat runoff from impervious surfaces. The parking garage provides shading to vehicles parked on the lower levels.
CD-2.11: Within the Downtown and Urban Village Area Boundaries, consistent with the minimum density requirements of the applicable Land Use / Transportation Diagram designation, avoid the construction of surface parking lots except as an interim use, so that long-term development of the site will result in a cohesive urban form. In these areas, whenever possible, use structured parking, rather than surface parking, to fulfill parking requirements. Encourage the incorporation of alternative uses, such as parks above parking structures.	Not applicable. The project is not within a Downtown or Urban Village overlay.
CD-3.2: Prioritize pedestrian and bicycle connections to transit, community facilities (including schools), commercial areas, and other areas serving daily needs. Ensure that the design of new facilities can accommodate significant anticipated future increases in bicycle and pedestrian activity.	Yes. The project will replace the existing sidewalks along the Ringwood Avenue and Trade Zone Boulevard frontages of the site. To enhance walkability, the project would install a landscape buffer between the sidewalk and Trade Zone Boulevard. On-site sidewalks are provided connecting to the public streets. The project will provide 19 on-site spaces for bicycles.
CD-3.4: Encourage pedestrian cross-access connections between adjacent properties and require pedestrian and bicycle connections to streets and other public spaces, with particular attention and priority given to providing convenient access to transit facilities. Provide	Yes. The project will replace the existing sidewalks along the Ringwood Avenue and Trade Zone Boulevard frontages of the site. To enhance walkability, the project would install a landscape buffer between the sidewalk and Trade Zone Boulevard. There are existing buffered bike lanes along the site's Ringwood Avenue and Trade Zone Boulevard frontages which allow bike access to the

TABLE 4.8-5 PROJECT COMPLIANCE WITH CITY OF SAN JOSÉ 2030 GHG REDUCTION STRATEGY

Emission Reduction Policies	Project Compliance
pedestrian and vehicular connections with cross-access easements within and between new and existing developments to encourage walking and minimize interruptions by parking areas and curb cuts.	Milpitas BART station. The project will provide 19 on-site spaces for bicycles.
LU-3.5: Balance the need for parking to support a thriving Downtown with the need to minimize the impacts of parking upon a vibrant pedestrian and transit oriented urban environment. Provide for the needs of bicyclists and pedestrians, including adequate bicycle parking areas and design measures to promote bicyclist and pedestrian safety.	Not applicable. The project is not located in the Downtown area.
TR-2.8: Require new development where feasible to provide on-site facilities such as bicycle storage and showers, provide connections to existing and planned facilities, dedicate land to expand existing facilities or provide new facilities such as sidewalks and/or bicycle lanes/paths, or share in the cost of improvements.	Yes. The project will replace the existing sidewalks along the Ringwood Avenue and Trade Zone Boulevard frontages of the site. To enhance walkability, the project would install a landscape buffer between the sidewalk and Trade Zone Boulevard. There are existing buffered bike lanes along the site's Ringwood Avenue and Trade Zone Boulevard frontages which allow bike access to the Milpitas BART station. The project will provide 19 on-site spaces for bicycles.
TR-7.1: Require large developments and employers to develop and maintain TDM programs with TDM services provided for their residents, full-time and subcontracted workers, and visitors to promote use of non-automobile modes and reduce the vehicle trips.	Yes. The project would be required to implement a TDM program to reduce vehicle trips and VMT.
TR-8.5: Promote participation in car share programs to minimize the need for parking spaces in new and existing development.	Yes. The required TDM program would include a car share program as a component.
4) Water Conservation and Urban Forestry Measures	
MS-3.1: Require water-efficient landscaping, which conforms to the State's Model Water Efficient Landscape Ordinance, for all new commercial, institutional, industrial, and developer-installed residential development unless for recreation needs or other area functions.	Yes. The project includes water efficient landscaping.
MS-3.2: Promote use of green building technology or techniques that can help reduce the depletion of the City's potable water supply, as building codes permit. For example, promote the use of captured rainwater, graywater, or recycled water	Yes. The data center buildings would utilize an air-cooled chilled water system which would eliminate water consumption associated with building cooling. The project would utilize recycled water for landscape irrigation.

TABLE 4.8-5 PROJECT COMPLIANCE WITH CITY OF SAN JOSÉ 2030 GHG REDUCTION STRATEGY

Emission Reduction Policies	Project Compliance
as the preferred source for non-potable water needs such as irrigation and building cooling, consistent with Building Codes or other regulations.	
MS-19.4: Require the use of recycled water wherever feasible and cost-effective to serve existing and new development.	Yes. The project would utilize recycled water for landscape irrigation.
MS-21.3: Ensure that San Jose's Community Forest is comprised of species that have low water requirements and are well adapted to its Mediterranean climate. Select and plant diverse species to prevent monocultures that are vulnerable to pest invasions. Furthermore, consider the appropriate placement of tree species and their lifespan to ensure the perpetuation of the Community Forest.	Yes. The plant species have low water requirements and are suitable for San José's climate.
MS-26.1: As a condition of new development, require the planting and maintenance of both street trees and trees on private property to achieve a level of tree coverage in compliance with and that implements City laws, policies or guidelines.	Yes. The project would meet conditions of approval required for street trees and trees on private property.
ER-8.7: Encourage stormwater reuse for beneficial uses in existing infrastructure and future development through the installation of rain barrels, cisterns, or other water storage and reuse facilities.	No. The project is not proposing any rain barrels, cisterns, or other water storage facilities. The designers do not believe rainwater harvesting or the use of water storage facilities is feasible in Santa Clara County. Rainfall comes in a 3- or 4-month period at a time when irrigation is at its minimum. Storage of water for use during the dry weather has the potential for vector (pest) problems. Storage of water for use in chillers is not applicable because the project is using air-cooled chillers.
2030 Greenhouse Gas Reduction Strategy Compliance	
Renewable Energy Development 1. Install solar panels, solar hot water, or other clean energy power generation sources on development sites, or 2. Participate in community solar programs to support development of renewable energy in the community, or 3. Participate in San Jose Clean Energy at the Total Green level (i.e., 100% carbon-free electricity) for electricity accounts associated with the project.	Yes, with mitigation. Compliance with this policy is demonstrated by employing one or more of the following options. The project proposes an Alternative Measure that would allow it to either comply with Number 3 (i.e., participate at the Total Green Level) or participate in a clean energy program that accomplishes the same goals of 100 percent carbon-free electricity as the SJCE Total Green Level. Mitigation measure **GHG-2** would ensure that the electricity supply is consistent with the Total Green level. 1. The project is not proposing onsite renewable energy generation. The project owner will participate in the SJCE at the Total Green Level (i.e., 100 percent carbon-free electricity) for electricity accounts associated with the project, or enter into an electricity contract with SJCE or

TABLE 4.8-5 PROJECT COMPLIANCE WITH CITY OF SAN JOSÉ 2030 GHG REDUCTION STRATEGY

Emission Reduction Policies	Project Compliance
	participate in a clean energy program that accomplishes the same goals of 100 percent carbon-free electricity as the SJCE Total Green Level. As a result, onsite renewable energy generation is not needed to offset the project's emissions. 2. The project is not proposing to participate in community solar programs. 3. The project owner will participate in the SJCE at the Total Green Level (i.e., 100 percent carbon-free electricity) for electricity accounts associated with the project, or enter into an electricity contract with SJCE or participate in a clean energy program that accomplishes the same goals of 100 percent carbon-free electricity as the SJCE Total Green Level.
Building Retrofits – Natural Gas 1. Replace an existing natural gas appliance with an electric alternative (e.g., space heater, water heater, clothes dryer), or 2. Replace an existing natural gas appliance with a high-efficiency model	Not Applicable. The project does not include any retrofit of existing buildings.
Zero Waste Goal 1. Provide space for organic waste (e.g., food scraps, yard waste) collection containers, and/or 2. Exceed the City's construction & demolition waste diversion requirement.	Yes. 1. The project would be providing organic waste container. 2. The project would exceed the City's construction and demolition waste diversion requirements.
Caltrain Modernization 1. For projects located within ½ mile of a Caltrain station, establish a program through which to provide project tenants and/or residents with free or reduced Caltrain passes or 2. Develop a program that provides project tenants and/or residents with options to reduce their vehicle miles traveled (e.g., a TDM program), which could include transit passes, bike lockers and showers, or other strategies to reduce project related VMT.	Yes. 1. Not Applicable. The project is not within ½ mile of a Caltrain station. 2. Proposed. The project would be required to implement a TDM program to reduce vehicle trips and VMT.
Water Conservation	Yes.

TABLE 4.8-5 PROJECT COMPLIANCE WITH CITY OF SAN JOSÉ 2030 GHG REDUCTION STRATEGY	
Emission Reduction Policies	**Project Compliance**
1. Install high-efficiency appliances/fixtures to reduce water use, and/or include water-sensitive landscape design, and/or 2. Provide access to reclaimed water for outdoor water use on the project site.	1. The project will include high-efficiency fixtures to reduce water usage, consistent with the CALGreen Code requirements. The data center buildings would utilize an air-cooled chilled water system which would eliminate water consumption associated with building cooling. 2. The project would utilize recycled water for landscape irrigation.
Applicant Proposed Greenhouse Gas Reduction Measures	
Description of Proposed Measure	**GHG-2** requires the project owner to participate in the SJCE at the Total Green Level (i.e., 100 percent carbon-free electricity) for electricity accounts associated with the project, or enter into an electricity contract with SJCE or participate in a clean energy program that accomplishes the same goals of 100 percent carbon-free electricity as the SJCE Total Green Level.
Description of GHG Reduction Estimate	By either participating in SJCE's Total Green Level or participating in a clean energy program that accomplishes the same goals of 100 percent carbon-free electricity as the SJCE Total Green Level, all GHG emissions associated with the project's electricity consumption would be offset.

The City's 2030 GHGRS includes three compliance options for "Renewable Energy Development" at non-residential projects. Compliance can be achieved in one of three ways: installing solar panels, solar hot water, or other clean energy power generation sources onsite; participating in community solar programs; or participating as a customer of the SJCE program that supplies 100 percent carbon-free electricity (San José 2020).

The applicant has the option of choosing the level of renewables in the electricity supply by purchasing energy through different programs offered by either PG&E or SJCE. The applicant is agreeable to purchasing electricity from SJCE instead of PG&E. To ensure that the project would be consistent with the "Renewable Energy Development" objectives of the 2030 GHGRS, the project's participation in SJCE would need to occur at the Total Green level or the project would need to establish a 100 percent carbon-free electricity supply from PG&E. The alternative to PG&E through SJCE would involve the project electing to participate at the Total Green level. Participating at the Total Green level would allow the project to comply with the renewable energy development component of the city's 2030 GHGRS. Mitigation measure **GHG-2** would require the project owner to participate in SJCE at the Total Green level for electricity accounts associated with the project, or enter into an electricity contract with SJCE or participate in a clean energy program that accomplishes the same goals of 100 percent carbon-free electricity as the SJCE Total Green Level, to ensure compliance with the city's 2030 Greenhouse Gas Emissions Reduction Strategy.

City of San José Private Sector Green Building Policy. The project would be built in accordance with Title 24 and CALGreen, and would include green building measures to reduce energy consumption. The project would achieve LEED Silver certification as required by the city of San José Private Sector Green Building Policy (DayZenLLC 2022f).

Conclusion

Less Than Significant with Mitigation Incorporated. With the implementation of the efficiency measures to be incorporated into the project and mitigation measures **GHG-1** and **GHG-2**, GHG emissions related to the project would be consistent with the applicable plans and policies adopted to reduce GHG emissions and would comply with all regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. The potential for the project to conflict with an applicable plan, policy, or regulation for GHG emissions reductions would be less than significant.

4.8.4 Mitigation Measures

GHG-1: The project owner shall use renewable diesel for 100 percent of total energy use by the emergency backup generators, and only use ultra-low sulfur diesel (ULSD) as a secondary fuel in the event of supply challenges or disruption in obtaining renewable diesel. The City of San José Planning, Building and Code Enforcement (PBCE) may grant temporary relief from the 100 percent renewable diesel requirement if the project owner can demonstrate a good faith effort to comply with the requirement and that compliance is not practical. The project owner shall provide an annual report of the status of procuring and using renewable diesel to the director, or director's designee, of the City of San José PBCE demonstrating compliance with the mitigation measure.

GHG-2: The project owner shall participate in the San José Clean Energy (SJCE) at the Total Green level (i.e., 100 percent carbon-free electricity) for electricity accounts associated with the project, or enter into an electricity contract with SJCE or participate in a clean energy program that accomplishes the same goals of 100 percent carbon-free electricity as the SJCE Total Green Level, to ensure compliance with the city's 2030 Greenhouse Gas Emissions Reduction Strategy.

During operation, the project owner shall provide documentation to the director, or director's designee, with the City of San José Planning, Building and Code Enforcement (PBCE) of initial enrollment and shall submit annual reports to the director, or director's designee, with the City of San José PCBE documenting either continued participation in SJCE at the Total Green level or documentation that alternative measures continue to provide 100 percent carbon-free electricity, as verified by an independent third-party auditor specializing in greenhouse gas emissions.

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4.9 Hazards and Hazardous Materials

This section describes the environmental setting and regulatory background and discusses impacts associated with the construction and operation of the project with respect to hazards and hazardous materials.

HAZARDS AND HAZARDOUS MATERIALS Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☒	☐	☐
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

Environmental checklist established by CEQA Guidelines, Appendix G.

4.9.1 Environmental Setting

Hazardous Materials

Demolition and Construction. The proposed project would involve limited transport, storage, use, and disposal of hazardous materials during demolition and construction activities. Some examples of hazardous materials handling during demolition and construction would include the transport of fuels, lubricating fluids, and solvents

associated with construction equipment, as well as the transport of potentially contaminated soils excavated from the project site. All hazardous materials would be stored, handled, and used in accordance with applicable regulations. Spills and leaks of hazardous materials during construction activities could result in soil or groundwater contamination.

The proposed project would include demolition of buildings and infrastructure that would not be reused for the proposed project. This would include demolition of the buildings at both the 2400 Ringwood Avenue site and the 1849 Fortune Drive site. Due to the age of the 1849 Fortune Drive site, constructed in 1981, there is a small potential for asbestos containing material (ACM) on and within components of the building.

Operation. During operation of the backup generators they would use diesel fuel which would be stored in integrated tanks with a 12,000-gallon diesel fuel tank at the base of the stacked pair of generators and a 500-gallon diesel fuel tank installed within the upper generator of the stacked pair, for a combined diesel fuel storage capacity of approximately 237,500 gallons for all the generators (DayZenLLC 2021a). Diesel fuel would be delivered on an as-needed basis in a compartmentalized tanker truck with maximum capacity of 8,500 gallons. Each stacked generator pair would also include a 400-gallon Diesel Exhaust Fluid (DEF) tank; DEF contains urea and is used as part of the diesel engine combustion process to meet the emissions requirements. The project applicant states it will prepare a Spill Prevention, Control and Countermeasure Plan (SPCC) to address the storage, use and delivery of diesel fuel for the generators (DayZenLLC 2021a).

Hazardous Waste and Substances Sites

Existing and past land use activities are commonly used as indicators of sites or areas where hazardous material storage and use may have occurred or where potential environmental contamination may exist. For example, many historic and current industrial sites have soil or groundwater contaminated by hazardous substances. Other hazardous materials sources include leaking underground tanks in commercial and rural areas, contaminated surface runoff from polluted sites, and contaminated groundwater plumes. Current and former agricultural properties commonly have herbicide, pesticide, and/or fumigant soil contamination.

The project site is located within the City of San José in Santa Clara County in an urban environment consisting of a mix of industrial, commercial, warehousing, business park, and residential uses. Properties to the west, south, and east of the project site are primarily industrial facilities, business parks and office buildings, and warehouses. Properties north of the project site consist primarily of medium to high density residential.

The project area historically consisted mainly of agricultural land (orchards and row crops) with widely spaced residences. By the late 1960s, an increase in commercial and residential development is apparent in the general vicinity, including an auto wrecking yard to the north of the project site, across Trade Zone Boulevard. Other adjacent

properties are shown to have been developed for commercial use during the 1970s and 1980s (DayZenLLC 2021b).

Ground disturbance during construction would be susceptible to potentially encountering environmental contamination if located in the vicinity of hazardous material or environmentally contaminated sites. The project owner hired Cornerstone Earth Group, Inc. (Cornerstone) to conduct a Phase I Environmental Site Assessment (ESA) of the entire project site (includes both 2400 Ringwood Avenue and 1849 Fortune Drive) in June 2021 to determine the location of hazardous wastes and hazardous material release sites within American Society for Testing and Materials standards and to evaluate the potential for environmental concerns within and immediately adjacent to the project site (DayZenLLC 2021b, Appendix F). The analysis provided by Cornerstone included within the Phase I ESA a search of Environmental Data Resources, Inc.'s proprietary database related to generation, storage, handling, transportation, treatment of wastes, and the remediation of contaminated soil and groundwater sites. Cornerstone included searches of the State Water Resources Control Board's (SWRCB) GeoTracker database, and the California Department of Toxic Substance Control's (DTSC) EnviroStor database.

In addition to the Phase I ESA conducted by Cornerstone in 2021, several previous Phase I ESAs for the project site parcels have also been conducted by others. Four previous Phase I ESAs were reviewed by Cornerstone in the process of conducting their Phase I ESA for the project site parcels and are listed below. The Phase I ESAs from Partner Engineering and Science Inc. and Ramboll US Consulting, Inc. are included in the project application (DayZenLLC 2021b and 2021e, Appendices G, H, and I).

1849 Fortune Drive. The 1849 Fortune Drive parcel was formerly used as farmland and orchards from at least 1939 until the existing building was constructed in 1981 for use as a semiconductor fabrication facility. The site operated as a semiconductor fabrication operation from the early 1980s until 2016. HC 1849 Fortune LLC reportedly acquired the property, and it is currently vacant (DayZenLLC 2021b). The semiconductor fabrication operations reportedly involved dry etching, wet etching, developing, diffusion, epitaxy, implanting, aligning, polishing, and spinning, which included the use of solvents, gases, acids, and other chemicals. Of note, these past semiconductor fabrication operations involved the use of an acid waste neutralization system, generation of hazardous wastes, and use of two vapor degreasers containing halogenated solvents, presumed to be trichlorotrifluoroethane (Freon 113 or Blaco Tron TMS+) (DayZenLLC 2021b). The acid waste neutralization system appears to have been comprised of epoxy-coated subgrade trenches containing piping, a sump, an underground waste tank, and aboveground process tanks. The site has been vacant since 2016. The facility underwent decommissioning and closure activities between 2016 through 2019, which involved removal of equipment, wipe sampling of certain surfaces, and soil sampling beneath the previous acid waste neutralization system areas (as well subsequent excavation and off-site disposal of arsenic-impacted soils from this area to commercial/ industrial cleanup standards or background levels). Site closure activities did not include soil, soil vapor, or groundwater sampling in any areas of the property other than in the vicinity of the former

acid neutralization system (DayZenLLC 2021b). A closure letter was issued for the site in 2019 by the DTSC (DayZenLLC 2021b and DayZenLLC 2021e). The previous Phase I assessments concluded that due to the extended past industrial use (including prior use of vapor degreasers with halogenated solvents) and the limited nature of past subsurface investigation activities, unknown soil or groundwater contamination may exist on the site.

Staff conducted a site visit to this site in April 2022 and noted the site is vacant and surrounded by a chain link fence; the front of the building is not fenced and has a broken window/door covered by plywood. The areas around and visible within the fencing appears unkempt with miscellaneous materials scattered around including broken furniture, piping, cardboard boxes, and a 55-gallon drum.

The previous agricultural uses of the project site and surrounding area from at least 1939 until the early 1980s may have resulted in residual pesticide soil contamination. Past agricultural operations may have involved the application of arsenical and lead-based pesticides commonly used on orchards in the first half of the 20th century, or other organic pesticides commonly used on row crops and orchards during the period the area was farmed (DayZenLLC 2021e).

2400 Ringwood Avenue. The 2400 Ringwood Avenue parcel was farmland and orchards from at least 1939 until the existing building was constructed in 1996 for its current use as a medical equipment servicing facility. Olympus has occupied the building since it was constructed. The site is currently used by Olympus for medical equipment servicing, which involves cleaning, repairing, testing, and shipping repaired damaged endoscopes and endoscope support equipment. Ancillary operations at the facility include administrative activities, office operations, equipment rentals for use during longer repairs, and building maintenance. The primary materials used at the site are isopropyl alcohol for cleaning and a proprietary glue. A 125-gallon double-walled above ground diesel fuel tank is located inside an emergency generator enclosure on a concrete pad. There is no history of known onsite hazardous material use resulting in environmental contamination (DayZenLLC 2021b and DayZenLLC 2021e).

The adjacent former semiconductor fabrication facility at 1849 Fortune Drive has a history of soil contamination and although this site was granted closure in 2019, no groundwater sampling is known to have been conducted. Past industrial operations at 1849 Fortune Drive dating back to the early 1980s were chemically intensive using various types and quantities of hazardous chemicals. Although the 1849 Fortune Drive site is located up-gradient of the 2400 Ringwood Avenue parcel, with respect to the anticipated groundwater flow direction there may still be a possibility of contaminant migration onto the 2400 Ringwood Avenue property from this adjacent parcel due to the very close proximity (DayZenLLC 2022b and DayZenLLC 2022e).

Staff conducted a site visit to this site in April 2022 and noted the site is in active use by Olympus and that the site looked neat and orderly with no external visual signs of contamination. The interior of the building was not accessed.

Additionally, as noted for the 1849 Fortune Drive parcel, the past orchard operations may have involved the application of arsenical and lead-based pesticides commonly used on orchards in the first half of the 20th century, or other organic pesticides commonly used on row crops and orchards (DayZenLLC 2021e). This may have resulted in residual pesticide soil contamination.

Airports

There are no public or active private airports located within 2 miles of the project. The nearest airports are the Norman Y. Mineta San José International Airport, Reid-Hillview County Airport, and Moffat Federal Airport. The Norman Y. Mineta San José International Airport is located approximately 2.8 miles southwest of the project site, the Reid-Hillview County Airport is located approximately 5.8 miles south of the project site, and the Moffat Federal Airfield is approximately 7.9 miles northwest of the project site. The project site is not located with an Airport Approach Zone or Airport Influence Area (San José 2022).

Schools

There are no schools or daycares within 0.25 mile of the project site. The closest schools to the project site are the Mabel Mattos Elementary School and the Stratford Elementary School, which are located approximately 0.3 and 0.50 miles north of the project site, respectively.

Emergency Evacuation Routes

The Santa Clara Local Hazard Mitigation Plan (Santa Clara County 2017) and the San Jose *Emergency Operations Base Plan* (San José 2019) identify hazards and provide risk assessments for the potential natural hazards that could impact the city and the county. The plans do not identify any designated evacuation routes near the project site.

Wildfire Hazards

The California Department of Forestry and Fire Protection (CAL Fire) identifies and maps areas of significant fire hazards based on fuels, terrain, and other relevant factors. The maps identify this information as a series of Fire Hazard Severity Zones, which are progressively ranked in severity as un-zoned, moderate, high, and very high. Wildland fire protection in California is the responsibility of either the State, local, or federal government. State Responsibility Areas (SRAs) includes those areas where the financial responsibility of preventing and suppressing fires falls primarily on the State. Local Responsibility Areas (LRAs) include incorporated cities, unincorporated county areas, cultivated agriculture lands, and portions of the desert. LRA FHSZ are mapped as either Very High Fire Hazard Severity Zones (VHFHSZ) or as Non-VHFHSZs. LRA fire protection is typically provided by city fire departments, fire protection districts, counties, and by CAL FIRE under contract to local governments (OSFM 2022). Federal Responsibility Areas (FRA) are those located on federal lands not otherwise included in SRAs and LRAs. The project would be located within the Santa Clara County in the City of San José.

The Cal Fire maps for Santa Clara County indicate that the project site is located in an LRA (Cal Fire 2007). The proposed Project is located in a fully urbanized developed area with no wildlands at or near the project site. Within the LRA, the project site is not in an area designated as a very high fire hazard severity zone (VHFHSZ) (Cal Fire 2008). There are no FRA or SRA at or near the project site (Cal Fire 2007). For more information on wildfire hazards, see **Section 4.19 Wildfire**.

Regulatory Background

Hazardous substances are defined by federal and state regulations that aim to protect public health and the environment. Hazardous materials are those that have certain chemical, physical, or infectious properties. Hazardous substances are defined in the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) section 101(14), and also in Title 22, California Code of Regulations, section 66260.10 and California Health & Safety Code section 25501, which defines a hazardous material.

For this analysis, soil that is excavated from a site containing hazardous materials would be considered a hazardous waste if it exceeded specific Title 22, California Code of Regulations criteria, criteria defined in CERCLA, or other relevant federal regulations (see definition of hazardous waste, Title 22 Cal. Code Regs., § 66261.3.) Remediation (cleanup and safe removal/disposal) of hazardous wastes found at a site is required if excavation of these materials occurs; remediation may also be required if certain other activities occur. Even if soils or groundwater at a contaminated site do not have the characteristics required to be defined as hazardous wastes, remediation of the site may be required by regulatory agencies with jurisdictional authority. Cleanup requirements are determined on a case-by-case basis by the agency taking lead jurisdiction.

Federal

Resource Conservation and Recovery Act. The federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by the United States Environmental Protection Agency (U.S. EPA) for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act, which affirmed and extended the "cradle to grave" system of regulating hazardous wastes. The use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by the Hazardous and Solid Waste Act.

Comprehensive Environmental Response, Compensation, and Liability Act. Congress enacted the federal CERCLA, including the Superfund program, on December 11, 1980. This law provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA established requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous waste at these sites; and established a trust fund to provide for cleanup when

no responsible party could be identified. CERCLA also enabled the revision of the National Contingency Plan (NCP). The NCP provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The NCP also established the National Priorities List. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.

Clean Water Act. The Clean Water Act (CWA) is the principal federal statute protecting navigable waters and adjoining shorelines from pollution. The law was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. Since its enactment, the CWA has formed the foundation for regulations detailing specific requirements for pollution prevention and response measures. The U.S. EPA implements provisions of the CWA through a variety of regulations, including the NCP, as described above, and the Oil Pollution and Prevention Regulations. Implementation of the CWA is the responsibility of each state.

As part of the Clean Water Act, the U.S. EPA oversees and enforces the Oil Pollution Prevention regulation (Title 40 CFR Part 112), which is often referred to as the "SPCC rule" because the regulations describe the requirements for facilities to prepare, amend, and implement Spill Prevention, Control, and Countermeasure (SPCC) Plans. A facility is subject to SPCC regulations if the total above ground oil storage capacity exceeds 1,320 gallons, or the underground oil storage capacity exceeds 42,000 gallons, and if, due to its location, the facility could reasonably be expected to discharge oil into or upon the "navigable waters" of the United States. The rule specifies that proactive, and not passive, measures be used to respond to oil discharges.

National Pollutant Discharge Elimination System. The National Pollutant Discharge Elimination System (NPDES) permit program, created in 1972 by the CWA, helps address water pollution by regulating point sources that discharge pollutants to waters of the United States. The permit provides two levels of control: technology-based limits and water quality-based limits (if technology-based limits are not sufficient to provide protection of the water body). Under the CWA, U.S. EPA may authorize state, tribal, and territorial governments to administer the NPDES permit program, enabling them to perform many of the permitting, administrative, and enforcement aspects of the NPDES program. In states authorized to implement CWA programs, U.S. EPA retains oversight responsibilities. Within the State of California, the California the SWRCB issues both general permits and individual permits under the NPDES permit program.

Department of Transportation. The United States Department of Transportation is the primary federal agency responsible for regulating the proper handling and storage of hazardous materials during transportation under the Hazardous Materials Transportation Act (49 C.F.R. §§ 171-177 and 350-399).

Federal Aviation Administration. Title 14, Part 77.9 of the Code of Federal Regulations requires Federal Aviation Administration (FAA) notification for any construction or alteration of objects that may impact navigable airspace. Airports and

navigable airspace that are not administered by the Department of Defense are under the jurisdiction of the FAA navigable airspace exceeding 200 feet above ground level (AGL). It also requires notification for construction or alterations within 20,000 feet of an airport with a runway more than 3,200 feet in length if the height of the construction or alteration exceeds a slope of 100 to 1 extending outward and upward from the nearest point of the nearest runway of the airport. If a project's height exceeds 200 feet or exceeds the 100:1 surface, the project applicant must submit a copy of FAA Form 7460-1, Notice of Proposed Construction or Alteration, to the FAA.

State

California Environmental Protection Agency. The California Environmental Protection Agency (Cal EPA), created in 1991, unified California's environmental authority in a single cabinet-level agency and brought the California Air Resources Board (CARB), SWRCB, Regional Water Quality Control Boards (RWQCBs), Integrated Waste Management Board, DTSC, Office of Environmental Health Hazard Assessment, and Department of Pesticide Regulation under one agency. These agencies under the Cal EPA "umbrella" provide protection of human health and the environment and ensure the coordinated deployment of state resources. Their mission is to restore, protect and enhance the environment, to ensure public health, environmental quality, and economic vitality.

Department of Toxic Substances Control. DTSC is a department within Cal EPA and is the primary agency in California that regulates hazardous waste, cleans up existing contamination, and looks for ways to reduce the hazardous waste produced in California. DTSC regulates hazardous waste in California primarily under the authority of RCRA and the California Health and Safety Code. Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

The California Hazardous Waste Control Law. DTSC and Cal EPA administer and enforce the California Hazardous Waste Control Law to regulate hazardous wastes. The Hazardous Waste Control Law lists 791 chemicals and about 300 common materials that may be hazardous; establishes criteria for identifying, packaging and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal and transportation; and identifies some wastes that cannot be disposed of in landfills.

California Occupational Safety and Health Administration. California Occupational Safety and Health Administration (Cal OSHA) is the primary agency responsible for worker safety related to the handling and use of chemicals in the workplace. Cal OSHA standards are generally more stringent than federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (Title 8, Cal. Code Regs., §§ 337340). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings. Cal OSHA is also the primary agency that oversees worker safety as

it relates to exposure to dusts, fumes, mists, vapors, and gases (Title 8, Cal. Code Regs., §§441528) which includes asbestos, lead, and concrete or masonry dust.

Porter-Cologne Water Quality Act. This state law provides a comprehensive water quality management system for the protection of California waters. The act designates the SWRCB as the ultimate authority over State water rights and water quality policy and also established nine RWQCBs to oversee water quality on a day-to-day basis at the local and regional level. The RWQCBs have the responsibility of granting NPDES permits and setting waste discharge requirements for stormwater runoff from construction sites. The proposed project's NPDES permits in California would be under the jurisdiction of the San Francisco Bay RWQCB.

Department of California Highway Patrol. Department of California Highway Patrol is the primary agency responsible for enforcing the regulations related to the transport of hazardous materials on California roads and highways (Title 13, Cal. Code Regs., §§ 1160-1167).

The Aboveground Petroleum Storage Act Program. The aboveground program requires tank facilities storing greater than 1,320 gallons of petroleum that stores any amount of petroleum, to develop and implement the SPCC Plan requirements (CFR 2021). A tank facility is any tank or tanks that are aboveground, including connected piping, that contain petroleum and are used by an owner or operator at a single location or site, is in secondary containment, and it is used to hold oil. The Certified Unified Program Agency (CUPA) regulates businesses storing petroleum in aboveground containers or tanks. (California Health and Safety Code, Chapter 6.67, Sections 25270-25270.13)

Local

Santa Clara Department of Environmental Health Hazardous Materials Compliance Division. Senate Bill 1082 (Health and Safety Code Chapter 6.11) established the Unified Program (a unified hazardous waste and hazardous materials management regulatory program). The Unified Program is implemented at the local level by local government agencies certified by Cal EPA, known as CUPA. CUPA agencies implement all the Unified Program elements and serve as a local contact for area businesses. The CUPA for the project area is the Santa Clara Department of Environmental Health (DEH) Hazardous Materials Compliance Division (HMCD). As CUPA for Santa Clara County, the HMCD administers the following California programs:

- Hazardous Waste Generator Program - This program applies to businesses and facilities that generate hazardous waste in any quantity, consolidates hazardous waste generated at a remote site, or recycles more than 100 kilograms/month of excluded or exempted recyclable materials. Under this program HMCD performs hazardous waste compliance inspections to confirm compliance with hazardous materials storage and handling requirements.

- Hazardous Waste Tiered Permitting - HMCD has oversight of "Tiered Permits" Permit by Rule, Conditional Authorization, and Conditionally Exempt tiers which all generally outline/cover/address the treatment of waste generated onsite.
- Underground Storage Tank (UST) - HMCD implements this program to prevent discharges and releases of hazardous substances from USTs. HMCD issues UST permits, and conducts annual inspections, reviews and approve submissions regarding UST installations, repairs, upgrades, and closures, oversees UST system closure activities.
- Aboveground Storage Tank SPCC Plan - HMCD provides regulatory oversight by reviewing aboveground petroleum storage tank facility statements, reviewing and verifying SPCC Plans, and routine inspections of facilities with a total petroleum storage quantity at or above 1,320 gallons.
- Hazardous Materials Business Plan (HMBP) - Facilities that store any hazardous material at or above the State-defined thresholds, generally 55 gallons of a liquid, 200 cubic feet of a gas, and 500 pounds of a solid, are subject to a HMBP. HMCD oversees the preparation and submittal of the HMBP.
- California Accidental Release Prevention Program - Businesses that handle more than the State threshold quantity of a regulated substance must develop a Risk Management Plan (RMP); an RMP is a detailed engineering analysis of the potential accident factors present at a business and the mitigation measures that can be implemented to reduce this accident potential. HMCD determines the level of detail in the RMPs, reviews the RMPs, conducts facility inspections, and provides public access to the information.
- Site Mitigation Program - The HMCD administers the Site Mitigation Program which oversees the Leaking Underground Storage Tank Local Oversight Program, which oversees the cleanup of sites contaminated by petroleum from UST releases throughout Santa Clara County. In addition, the HMCD administers the Hazardous Materials Storage Ordinance (County Ordinance No. NS-517.31) and the Toxic Gas Ordinance (County Ordinance No. NS-517.44).

City of San José General Plan. *Envision San José 2040 General Plan* includes policies applicable to all development projects in San José. The following are applicable to the proposed project:

- Policy EC-7.1: For development and redevelopment projects, require evaluation of the proposed site's historical and present uses to determine if any potential environmental conditions exist that could adversely impact the community or environment.
- Policy EC-7.2: Identify existing soil, soil vapor, groundwater, and indoor air contamination and mitigation for identified human health and environmental hazards to future users and provide as part of the environmental review process for all development and redevelopment projects. Mitigation measures for soil, soil vapor, and groundwater contamination shall be designed to avoid adverse human health or

environmental risk, in conformance with regional, State, and Federal laws, regulations, guidelines, and standards.

- Policy EC-7.3: Where a property is located in or near proximity of known groundwater contamination with volatile organic compounds or within 1,000 feet of an active or inactive landfill, evaluate and mitigate the potential for indoor air intrusion of hazardous compounds to the satisfaction of the City's Environmental Compliance Officer and appropriate regional, state and federal agencies prior to approval of a development or redevelopment project.
- Policy EC-7.4: On redevelopment sites, determine the presence of hazardous building materials during the environmental review process or prior to project approval. Mitigation and remediation of hazardous building materials, such as lead-paint and asbestos-containing materials, shall be implemented in accordance with state and federal laws and regulations.
- Policy EC-7.5: On development and redevelopment sites, require all sources of imported fill to have adequate documentation that it is clean and free of contamination and/or acceptable for the proposed land use considering appropriate environmental screening levels for contaminants. Disposal of groundwater from excavations on construction sites shall comply with local, regional, and state requirements.

Santa Clara County Operational Area Hazard Mitigation Plan. The plan includes a risk assessment that identifies the natural hazards and risks that can impact a community based on historical experience, estimates the potential frequency and magnitude of disasters, and assesses potential losses to life and property. The plan also includes developed mitigation goals and objectives as part of a strategy for mitigating hazard-related losses.

San José City Emergency Operation Base Plan. The plan establishes the foundational policies and procedures that define how San José will prepare for, respond to, recover from, and mitigate against natural or human-caused disasters. It provides a description of the emergency management organization and how it is activated.

4.9-2 Environmental Impacts

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Construction

Less Than Significant Impact. During the demolition and construction phases of the project, the only hazardous materials used would be paints, cleaners, solvents, gasoline, motor oil, welding gases, and lubricants used by the contractor and construction equipment. When not in use, any hazardous material would be stored in designated construction staging areas in compliance with local, state, and federal requirements.

Records would be maintained for documenting compliance with the storage and handling of hazardous materials (DayZenLLC 2022u). Any impacts resulting from spills or other accidental releases of these materials would be limited to the site and easily cleaned up due to the small quantities involved and their infrequent use, hence reduced chances of worker exposure or environmental contamination. Due to the age of the building at the 1849 Fortune Drive site there is a small potential that ACM may be present and may be mobilized by demolition activities, however, permits for demolition will be required from the Bay Area Air Quality Management District that require an asbestos survey prior to commencement of demolition activities. Any ACM discovered would be removed/remediated in accordance with applicable local and State regulations. Therefore, the routine transport, use or disposal of hazardous materials during project demolition and construction would have a less than significant impact to the public or the environment.

During construction, all of the fuel tanks for the 36 3-MW and 3 1-MW diesel generators would have to be filled. The transportation of the diesel fuel to the site would take many fuel tanker truck trips. Diesel fuel has a long history of being routinely transported and used as a common motor fuel. It is appropriate to rely upon the extensive regulatory framework that applies to the shipment of hazardous materials on California highways and roads to ensure safe handling in general transportation (see Federal Hazardous Materials Transportation Law 49 USC § 5101 et seq., DOT regulations 49 CFR subpart H, §§ 172–700, and California Department of Motor Vehicles regulations on hazardous cargo). Thus, the transportation of diesel fuel to the project sites during construction would have a less than significant impact to the surrounding public or environment.

Operation

Less Than Significant Impact. Some oils and lubricants could be stored on-site for maintenance of mechanical equipment in the equipment yards. Minor amounts of hazardous materials could also be stored and used on-site for operation and maintenance of the data center and associated facilities. Diesel fuel would be used during emergency operation of the generators, and routine maintenance and testing. Air quality regulations limit each engine to no more than 50 hours operation annually for reliability purposes (i.e., testing and maintenance). Maintenance and readiness testing usually occurs at loads ranging from 10 to 100 percent load.

Projects with diesel-fired back up generators would use standard practice for fuel quality and maintenance of stored diesel fuel. Standard practice includes that each engine would have a fuel filtration system that would filter the fuel contents daily. The fuel filtration system would be inspected quarterly, and a fuel sample would be collected for testing. The fuel filters would be replaced as needed or annually which would reduce any effects of fuel degradation on engine components and operation. Commercial diesel fuels also contain biocides that prevent microbial growth and additives that help to stabilize the fuel for several months.

Although diesel fuel would be stored on-site, it would be stored in fuel tanks integrated into the stacked generators. Each stacked pair of diesel-fired backup generators would have a storage capacity of 12,500 gallons of diesel fuel and 400 gallons of diesel exhaust fluid (DEF.) DEF is a non-hazardous solution of 67.5 percent water and 32.5 percent automotive grade urea. The estimated shelf life of the DEF based on ambient temperatures for Santa Clara County is approximately 12-18 months. The generator's integrated fuel tanks would be of a double-walled high integrity design. The interstitial space between the inner and outer walls of each tank would be continuously monitored electronically for the presence of leaks through the inner wall. The monitoring system would be electronically linked to an alarm system in the security office that would alert personnel if a leak were detected in any of the inner tanks. The above design features would ensure that the diesel fuel generators meet the secondary containment requirements of the California Health and Safety Code for the above ground petroleum storage tank program.

Diesel fuel would be scheduled and delivered on an as-needed basis in a compartmentalized tanker truck with maximum capacity of 8,500 gallons, resulting in approximately four fuel tanker trips annually. Diesel fuel transport would comply with all appropriate regulations regarding transport of hazardous materials on California roads and highways. The tanker truck would extend its fuel fill hose through one of multiple hinged openings in the precast screen wall surrounding the generator equipment yard. A spill catch basin would be located at each fill port for the generators. The DEF tank located within the enclosure of the lower generator in each stacked pair can be filled in place from other drums, totes, or bulk tanker truck at the tank top. Warning signs and/or wheel chocks would be used in the loading and/or unloading areas to prevent fueling vehicles from departing before complete disconnection of flexible or fixed transfer lines. An emergency pump shut-off would be utilized if a pump hose breaks while fueling the tanks. Tanker truck loading and unloading procedures would be posted at the loading and unloading areas.

The emergency backup generator units would be housed within a self-sheltering enclosure that prevents the intrusion of stormwater. Additionally, to prevent a release from entering the storm drain system, storm drains would be temporarily blocked off during fueling events. Rubber pads or similar devices would 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 would be scheduled at times when storm events are improbable (DayZenLLC 2021a).

Hazardous materials storage at the project site would be regulated under local, state and federal regulations. For example, the project would be subject to the Aboveground Petroleum Storage Act (APSA) due to the volume of fuel that would be stored in aboveground tanks. Tank facilities under the Aboveground Petroleum Storage Act must comply with all requirements and prepare and implement a SPCC plan, which the applicant has committed to preparing. The spill prevention measures described above

would be incorporated into the plan. Additionally, a HMBP would be required and completed for the safe storage and use of chemicals and would incorporate all relevant regulations. Transport of diesel fuel will comply with regulations that apply to the shipment of hazardous materials on California highways and roads to ensure safe handling in general transportation. Conformance with relevant laws and regulations would minimize the likelihood of hazardous material releases from the project. The project would not create a hazard to the public and thus impacts would be less than significant.

b. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Construction

Less Than Significant Impact. As described under the discussion for impact criterion "a", project demolition and construction activities would require the limited use of hazardous materials, such as fuels, lubricants, and solvents. The storage and use of hazardous materials during demolition and construction could result in the accidental release of small quantities of hazardous materials typically associated with minor spills or leaks. However, as discussed in impact criterion "a", hazardous materials would be stored, handled, and used in accordance with applicable regulations. Personnel would be required to follow instructions on health and safety precautions and procedures to follow in the event of a release of hazardous materials. All equipment and materials storage would be routinely inspected for leaks. Records would be maintained for documenting compliance with the storage and handling of hazardous materials.

For the previously described reasons, the project impacts would be less than significant.

Operation

Less Than Significant Impact. The project would not create a significant hazard to the public or environment due to an accidental release of a hazardous material. As described above in criterion "a" the project would include the use and storage of diesel fuel for the operation, and testing and maintenance of the backup generators. Additionally, minor amounts of hazardous materials would be stored and used for maintenance of on-site equipment. All hazardous materials would be used and stored in accordance with federal, State, and local regulations. A HMBP and a SPCC plan would be completed for the safe storage and use of chemicals. The SPCC would include the listed spill prevention measures outlined in criterion "a". The conformance with relevant laws and regulations would minimize the likelihood of hazardous material releases from the project.

With the above listed safety features and precautions, the project impacts would be less than significant.

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Construction

No Impact. There are no schools located or proposed within 0.25 mile of the project site. In addition, no acutely hazardous materials would be used during project demolition or construction activities, and there are no hazardous materials that would be emitted from the site at rates capable of creating offsite impacts. Therefore, there would be no impact.

Operation

No Impact. There are no schools located or proposed within 0.25 mile of the project site, and no acutely hazardous material would be used during project operation. Therefore, no impact from routine maintenance or operation would occur.

d. Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Construction

Less Than Significant with Mitigation Incorporated. According to a review of the Envirostor and GeoTracker databases, the project site does not have any known, open cases on the hazardous materials sites compiled pursuant to Government Code section 65962.5. There are two DTSC site closure listings for the 1849 Fortune Drive site, both listings are for Micrel LLC that formerly operated the semiconductor fabrication facility located at the site and include the same site closure letter for the previously discovered contamination at the 1849 Fortune Drive site from the County of Santa Clara dated February 5, 2019. Cornerstone's Phase I Environmental Site Assessment indicates that due to the limited testing at the 1849 Fortune Drive site conducted for the site closure, it may have unknown environmental contamination despite its DTSC/County of Santa Clara closure in 2019. The potential contamination from the 1849 Fortune Drive site may have migrated to other locations within the site or to the immediately adjacent areas of the 2400 Ringwood Avenue site. (DayZenLLC 2021b).

Demolition activities for the project would include ground disturbing activities for removal of below ground structures such as utilities and building structure foundations. Ground disturbing activities associated with construction would include site grading, construction of concrete foundations and structural steel framing, fencing, installation of underground utilities, including conduit and electrical cabling to interconnect the generators to the buildings, and placement and securing of the generators. Ground disturbing activities would have the potential to encounter unidentified contaminated soil. The applicant proposed mitigation to reduce potential impacts associated with contaminated soil. The

measure requires the preparation of a Site Management Plan (SMP) and Health and Safety Plan (HSP) to reduce impacts associated with encountering contaminated soil. Staff evaluated this measure in the context of the potential impacts and concludes the measure is insufficient in that it does not specify enough detail about what information should be included in the SMP and HSP to meet industry standards. This generally includes a description of the project site and hazardous materials that would be used, comprehensive procedures for both hazardous materials used and encountering unexpected soil and groundwater contamination. Reporting, worker training, personal protective equipment requirements, and emergency procedures are also required. SMPs and HSPs prepared with insufficient information could result in workers not being prepared for hazardous material conditions at the project site. The applicant proposed measure does not require inclusion of procedures in the event unknown contamination is encountered nor for any inclusion of requirements for groundwater handling, contaminated or otherwise in the SMP. The applicant proposed measure does not include any detail as to what type of information should be included in preparation of the HSP, including that it should be specific to site conditions, should be prepared by an industrial hygienist, and should include details regarding education of workers regarding site conditions and appropriate personal protective equipment.

Staff proposes mitigation measure **HAZ-1** for preparation of a SMP with the required level of detail to establish proper procedures to be taken when unknown contaminated soil is found and how to dispose of the contaminated soil properly. In addition, staff proposes mitigation measure **HAZ-2** for preparation of HSP with specific details to establish worker training, provide provisions for personal protective equipment and procedures in the event that contaminated soil is encountered, along with emergency contact protocols. Staff concludes that with implementation of **HAZ-1,** and **HAZ-2**, impacts to the public or the environment due to contaminated soils, would be reduced to a less than significant level.

Operation

No Impact. Operation and maintenance activities would not involve excavation activities and would therefore have no impact.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

Construction

No Impact. There are no public or private airports within 2 miles of the project and the project does not fall within an airport land use plan. Therefore, the project would not pose a safety hazard and would have no impact. Project construction would not result in excessive noise impacts for people residing or working in the project area, as described in a more detailed analysis in **Section 4.13 Noise**.

Operation

No Impact. Operation and maintenance activities for the project site would be similar to those for a similarly sized industrial building and would not have an impact on people working or residing in the area. In addition, the thermal plume generated by the project would not be large enough to pose a safety hazard to any aircraft near the Norman Y. Mineta San José International Airport, Reid-Hillview County Airport, or Moffat Federal Airport. Detailed analysis of potential thermal plume impacts is contained in **Section 4.17 Transportation**.

f. Would the project impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?

Construction

No Impact. A review of the Santa Clara County *Operational Area Hazard Mitigation Plan* and the San Jose *Emergency Operations Base Plan* for the project revealed no specific mapping or delineation of emergency evacuation or access routes. The plans identified that the area police, fire department, and other emergency services would implement their emergency response or evacuation plans according to their communications protocols and hazard mitigation programs. The project site is not identified on any emergency evacuation or access routes. In addition, the construction would not require any road closures since the work would all be done onsite. During project construction, there would be no impact to an adopted response plan or emergency evacuation plan.

Operation

No Impact. After construction, no lane closures would be needed, and no impact to a response plan or emergency evacuation plan would occur. Additionally, to prevent issues with fire access to the site, a fire variance will need to be obtained, and the fire variance required modifications and fire prevention measures added as part of the project (DayZenLLC 2022m). Detailed discussion of the required fire variance is contained in **Section 4.17 Transportation**

g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

Construction

No Impact. The project site is located in an urban part of Santa Clara County within an LRA. It is not located within a FRA or SRA, nor is it mapped within a LRA VHFSZ. The project site is in a fully urbanized area and is not adjacent to wildlands. Industrial and commercial buildings bound the project to the west, east, and south and primarily medium and high-density residential buildings are located north of the project site across Trade Zone Boulevard. Although equipment and vehicles used during construction, as

well as welding activities, have the potential to ignite dry vegetation, the project is located within an urban area surrounded by industrial and commercial zones that have irrigated landscaping and very limited dry vegetation. In the event of construction triggered fire at the project site, it would be served by the San José Fire Department. Therefore, there would be no impact from wildland fires resulting from construction activities related to the project.

Operation

No Impact. The project site is located within a LRA that is not located within or near any wildlands. The project site would be served by the San José Fire Department in the event of project related or other local fires. As discussed for construction, there would be no impact from wildland fires.

4.9.3 Mitigation Measures

HAZ-1: Prior to issuance of demolition or grading permits, the project applicant shall prepare a Site Management Plan (SMP) to guide activities during demolition, excavation, and initial construction to ensure that potentially contaminated soils are identified, characterized, removed, and disposed of properly. The purpose of the SMP is to establish appropriate management practices for handling impacted soil or other materials that may be encountered during construction activities.

The SMP shall be implemented during project demolition and construction and shall include, but shall not be limited to, the following components:

- A detailed discussion of the site background;
- Description of soil testing, which shall include (but not be limited to) the collection of shallow soil samples (upper one-foot) and analyses for lead and organochlorine pesticides to verify presence of absence of unknown soil contamination. This soil profiling shall be performed prior to initiation of project construction.
- Protocols for sampling of in-place soil to facilitate the profiling of the soil for appropriate off-site disposal or reuse, and for construction worker safety, dust mitigation during demolition and construction and potential exposure of contaminated soil to future users of the site prior to project construction.
- Procedures to be undertaken in the event that contamination is identified above action levels or previously unknown contamination is discovered prior to or during project demolition or construction;
- Notification procedures if previously undiscovered significantly impacted soil or free fuel product is encountered during demolition or construction;
- Onsite petroleum contaminated soil reuse guidelines based on the California Regional Water Quality Control Board (RWQCB), San Francisco Bay Region's reuse policy;
- Sampling and laboratory analyses of excess soil requiring disposal at an appropriate off-site waste disposal facility;

- Procedures and protocols for the safe storage, stockpiling, and disposal of contaminated soils; and
- Protocols to manage groundwater that may be encountered during trenching or subsurface excavation activities.

If there are no contaminants identified on the project site that exceed applicable screening levels for construction workers and residential users published by the RWQCB, California Department of Toxic Substances Control (DTSC), or Environmental Protection Agency, the SMP does not need to be submitted to an oversight agency and instead only needs to be submitted to the City of San José prior to demolition activities.

If contaminants are identified at concentrations exceeding applicable screening levels, the project applicant shall obtain regulatory oversight from Santa Clara County Department of Environmental Health (SCCDEH) or the DTSC under a Site Cleanup Program. The SMP and planned remedial measures shall be reviewed and approved by the SCCDEH or DTSC. A copy of the SMP shall be submitted to the Supervising Environmental Planner of the Department of Planning, Building & Code Enforcement and the Supervising Environmental Compliance Officer in the City of San José's Environmental Services Department. Copies of the approved SMP shall be kept at the project site.

Any contaminated soils identified by testing conducted in compliance with the SMP and found in concentrations above established thresholds shall either be removed and disposed of according to California Hazardous Waste Regulations or the contaminated portions of the site shall be capped beneath the planned development under the regulatory oversight of the Santa Clara County Hazardous Materials Compliance Division (HMCD) or the DTSC. Contaminated soil excavated from the site shall be hauled off-site and disposed of at a licensed hazardous materials disposal site.

HAZ-2: All contractors and subcontractors at the project site shall develop a Health and Safety Plan (HSP) specific to their scope of work and based upon the known environmental conditions for the site prior to project construction. The HSP shall be prepared by an industrial hygienist. The HSP shall be approved by the Director or Director's designee with the City of San José Department of Planning, Building & Code Enforcement and the City of San José Environmental Services Department and implemented under the direction of a Site Safety and Health Officer.

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

- A description of potential health and safety hazards;
- A description of applicable regulations and standards to be implement for the project site;
- Provisions for personal protection and monitoring exposure to construction workers;
- Education for workers in the proper use of personnel protection;

- Provisions for Hazard Communication Standard (HAZCOM) worker training and education including information about HAZCOM labeling, copies of Safety Data Sheets for any hazardous materials that may be used onsite;
- Identification of worker, supervisor, and employer health and safety responsibilities; and
- A description of emergency procedures and identification of responsible personnel to contact in event of an emergency. Include contact information for responsible personnel and other emergency contact numbers.

Copies of the approved HSP shall be kept at the project site.

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4.10 Hydrology and Water Quality

This section describes the environmental setting and regulatory background and discusses impacts associated with the construction and operation of the project with respect to hydrology and water quality.

HYDROLOGY AND WATER QUALITY Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces in a manner which would:				
i. result in substantial erosion or siltation, on- or offsite;	☐	☐	☒	☐
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
iii. create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv. impede or redirect flood flows?	☐	☐	☒	☐
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Environmental checklist established by CEQA Guidelines, Appendix G

4.10.1 Environmental Setting

Storm Drainage and Water Quality

The project would be constructed in the city of San José, within the Lower Penitencia Creek watershed, east of Coyote Creek. Storm water from the project site drains into Lower Penitencia Creek which drains into Coyote Creek and ultimately to the San Francisco Bay. According to Figure 6-3 of the City of Santa Clara Urban Water Management Plan for 2020, the project site does not lie within a recharge zone (Santa

Clara 2021).

The site was previously used for commercial/industrial purposes and is currently mostly impervious to infiltration of surface water. The water quality of Coyote Creek, which receives storm water from the site via Lower Penitencia Creek, is influenced by pollutants contained in storm water runoff from the site. Storm water runoff from urban areas typically contains conventional pollutants such as sediment, metals, pesticides, herbicides, oil, grease, asbestos, lead, and animal wastes.

Groundwater

The Santa Clara Valley groundwater basin is divided into four interconnected subbasins that border the southern San Francisco Bay. The proposed project would be located in the Santa Clara Subbasin, which extends across the Santa Clara Valley in the region south of San Francisco Bay (Santa Clara 2021).

Fluctuations in rainfall, changing drainage patterns, and other hydrologic factors can influence groundwater levels. Based on the Santa Clara County Depth to First Groundwater online map (SCVWD 2017), the historic shallowest observed depth to groundwater in the general site area was about 5 to 10 feet below ground surface (bgs).

Flooding

The elevation of the existing project site is between 42 and 48 feet above sea level with respect to the 1988 North American Vertical Datum (NAVD88) (USGS 2022). According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM), the project site is located within Zone AO. Zone AO is defined as "areas subject to inundation by one-percent annual chance shallow flooding, usually sheet flow on sloping terrain, where average depths are between one and three feet" (FEMA 2009). The southwest corner of the project site is identified as within the Anderson Dam failure inundation zone (SCVWD 2016). Also, the project site is not within an area mapped as either currently low lying or vulnerable to 10 feet of sea level rise in the National Oceanic and Atmospheric Administration's Digital Coast, Sea Level Rise Viewer (NOAA 2020).

Regulatory Background

Federal

Clean Water Act and California's Porter-Cologne Water Quality Control Act. The State Water Resources Control Board (SWRCB) and its nine RWQCBs are responsible for the regulation and enforcement of the water quality protection requirements of the federal Clean Water Act (CWA) and the state's Porter-Cologne Water Quality Control Act (Porter-Cologne). The National Pollutant Discharge Elimination System (NPDES) is the permitting program that allows point source dischargers to comply with the CWA and Porter-Cologne laws. This regulatory framework protects the beneficial uses of the state's surface and groundwater resources for public benefit and environmental protection.

Protection of water quality could be achieved by ensuring the proposed project complies with applicable NPDES permits from the SWRCB or the San Francisco Bay RWQCB.

Under Section 303(d) of the CWA, states are required to identify impaired surface water bodies and develop total maximum daily loads (TMDLs) for contaminants of concern. The TMDL is the quantity of pollutant that can be assimilated by a water body without violating water quality standards. Listing of a water body as impaired does not necessarily suggest that the water body cannot support the beneficial uses; rather, the intent is to identify the water body as requiring future development of a TMDL to maintain water quality and reduce the potential for future water quality degradation. The project site is located within the Lower Penitencia Creek watershed, which is not currently included on the United States Environmental Protection Agency's Section 303(d) List of Impaired Waters for California.

The San Francisco Bay RWQCB issued a Municipal Regional Storm Water NPDES Permit (Permit Number CAS612008) that requires the city of San José to implement a storm water quality protection program. This regional permit applies to 77 Bay Area municipalities, including the city of San José. Under the provisions of the Municipal NPDES Permit, redevelopment projects that disturb more than 10,000 square feet are required to design and construct storm water treatment controls to treat post-construction storm water runoff. The permit requires the post-construction runoff from qualifying projects to be treated by using low impact development treatment controls, such as biotreatment facilities.

The Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) assists co-permittees, such as the city of San José, in the implementation of the provisions of the Municipal NPDES Permit. In addition to water quality controls, the Municipal NPDES Permit requires all new and redevelopment projects that create or replace one acre or more of impervious surface to manage development-related increases in peak runoff flow, volume, and duration, where such hydromodification is likely to cause increased erosion, silt pollutant generation, or other impacts to beneficial uses of local rivers, streams, and creeks. Projects may be deemed exempt from the permit requirements under one of the following three conditions; 1) Project will not increase the potential for erosion or other non-beneficial impacts, 2) Project drains into a hardened channel or tidally influenced area and 3) Project lies within a watershed that is over 90% developed or with greater than 65 percent impervious surface (SCVURPPP 2005). The project site is located in an area with greater than 65 percent impervious surface; thus, the project site is not subject to the SCVURPPP hydromodification requirements.

Federal Emergency Management Agency Flood Insurance Program. The magnitude of flood used nationwide as the standard for floodplain management is a flood having a probability of occurrence of one percent in any given year. This flood is also known as the 100-year flood, or base flood. FIRM, the official map created and distributed by FEMA for the National Flood Insurance Program that shows areas subject to inundation by the base flood for participating communities. FIRMs contain flood risk information based

on historic, meteorologic, hydrologic, and hydraulic data, as well as open-space conditions, flood control works, and development. As stated above, the proposed project site is located in a Zone AO and therefore subject to inundation by one-percent annual chance shallow flooding, usually sheet flow on sloping terrain, where average depths are between one and three feet.

State

State Sustainable Groundwater Management Act. The 2014 Sustainable Groundwater Management Act (SGMA) requires local public agencies and Groundwater Sustainability Agencies (GSAs) in high- and medium-priority basins to develop and implement Groundwater Sustainability Plans (GSPs) or Alternatives to GSPs. GSPs are detailed road maps for how groundwater basins will be managed to reach long term sustainability.

The Santa Clara Valley Water District (SCVWD) is the exclusive GSA for the Santa Clara Valley groundwater Subbasin, which contains the proposed project. SCVWD developed a groundwater management plan for the Santa Clara and Llagas Subbasins that is intended to be functionally equivalent to a GSP.

Local

City of San José Municipal Code. Chapter 17.08 (special flood hazard area regulations) of the San José Municipal Code promotes the public health, safety, and general welfare, to minimize public and private losses due to flood conditions in specific areas by legally enforceable regulations applied uniformly throughout the community to all publicly and privately owned land within flood prone areas.

City of San José Post-Construction Urban Runoff Management. City Policy No. 6-29 implements the storm water treatment requirements of Provision C.3 of the Municipal NPDES Permit. The same policy requires all new and redevelopment projects regardless of size and land use to implement post-construction Best Management Practices (BMPs) and Treatment Control Measures (TCMs) to the maximum extent practicable. This policy also established specific design standards for post-construction TCMs for projects that create, add, or replace 10,000 square feet or more of impervious surface area to use site design and source control measures and numerically sized low impact development storm water treatment measures in accordance with the strategies set forth in the policy.

City of San José Hydromodification Management. City Policy No. 8-14 implements the storm water treatment requirements of Provision C.3 of the Municipal NPDES Permit. Policy No. 8-14 requires all new and redevelopment projects that create or replace one acre or more of impervious surface to manage development-related increases in peak runoff flow, volume, and duration, where such hydromodification is likely to cause increased erosion, silt pollutant generation or other impacts to beneficial uses of local

rivers, streams, and creeks. The policy requires these projects to be designed to control project-related hydromodification through a Hydromodification Management Plan (HMP).

4.10.2 Environmental Impacts

a. Would the project violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Construction and Operation

Less Than Significant Impact. The proposed project would consist of 9.8 acres and therefore be subject to construction-related storm water permit requirements of California's NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) administered by the SWRCB. Prior to any ground-disturbing construction activity, the applicant must comply with the Construction General Permit, which includes preparation of a construction Storm Water Pollution Prevention Plan (SWPPP). With implementation of the construction SWPPP, redevelopment of the site would not cause a substantial degradation in the quality, or an increase in the rate or volume, of storm water runoff from the site during construction. In addition, the Municipal NPDES permit, as well as the SCVURPPP, requires that redevelopment not result in a substantial net increase in storm water flow exiting the project site during operation. As a result, runoff from the project site would not be expected to exceed the capacity of the local drainage system or to significantly contribute to the degradation of storm water runoff quality.

The project could result in soil excavation to a maximum depth of 2 feet below grade and is not expected to encounter groundwater during excavation activities. However, if dewatering is necessary, and the discharge is found to be uncontaminated, the project owner would be allowed to discharge dewatering water to waters of the US, within the San Francisco RWQCB's jurisdiction, under the Construction General Permit. If the discharge is found to be contaminated, a special permit would be necessary depending on the nature of the contamination, requiring the applicant to treat the water before discharging, or haul away the untreated water by a permitted service provider.

Under existing conditions, the site has approximately 348,633 square feet of impervious surface. Implementation of the project would result in only a slight increase in site impervious surface to 403,564 square feet. Although the amount of impervious surface is not expected to increase impact to water quality, bioretention would be installed and runoff directed toward vegetated areas as part of the project, which would detain storm water for soil infiltration. The project would be required to comply with the City of San José's Post-Construction Urban Runoff Policy No. 6-29, Municipal NPDES Permit, and the SCVURPPP. The plans and permits work together to establish specific requirements to reduce storm water pollution from new and redevelopment projects. They also require

post-construction storm water runoff to be treated by appropriately sized low impact development treatment controls.

Thus, the project would not be expected to violate water quality standards or waste discharge requirements during construction and operation, and impacts would be less than significant.

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

Construction and Operation

Less Than Significant Impact. The project does not propose to pump groundwater or install groundwater extraction wells and will rely on municipal water service. The project is within the San José Water Company (SJWC) service area using the San José Municipal Water System (SJMWS). The primary source of water in this aera (SJWC 2022) is surface water imported by the Santa Clara Valley Water District (SCVWD) from the Sacramento-San Joaquin Delta (SCVWD 2022). Recycled water to the site would be obtained from the South Bay Water Recycling (SBWR) system for landscape irrigation.

The City of San Jose's 2020 Urban Water Management Plan (UWMP) shows that the city would have a potable water deficit in a multiple dry year scenario, which assumes supply from SFPUC would be interrupted. Under this scenario, the city's supply from SFPUC might be interrupted if certain conditions specified in the interruptible contract between the city and SFPUC are met. If supply from SFPUC is interrupted, the city would have to replace the demand using groundwater supplied by the San José Municipal Water System (SJMWS) (San José 2021).

According to the City of San Jose's 2020 UWMP, the groundwater basin has been managed successfully by the SCVWD to prevent overdraft conditions. In case of a water supply shortage, the city has adopted water conservation policies to reduce demand such that available supplies are sufficient to meet demand (San José 2021).

The project site is not located in an area that serves as recharge to Santa Clara Valley aquifers. The project does not propose to pump groundwater or install groundwater extraction wells. Therefore, the project's impact on groundwater supplies or recharge during construction and operation would therefore be less than significant.

c. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces in a manner which would:

i. Result in substantial erosion or siltation on- or off-site;

Construction and Operation

Less Than Significant Impact. The proposed project would not result in a substantial increase of impervious areas and would include a new storm water collection system that would incorporate source and treatment control BMPs. These BMPs would reduce the overall runoff into the city's collection system, erosion, and sedimentation impacts. This post-construction design would therefore not be expected to substantially increase runoff (rate or volume) from the site. The storm water design is expected to comply with the SCVURPPP. Therefore, impacts would be less than significant.

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

Construction and Operation

Less Than Significant Impact. Surface runoff from the proposed project would be controlled as described in criterion "a" and "c (i)" above. Therefore, impacts would be less than significant.

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

Construction and Operation

Less Than Significant Impact. The proposed project would result in a new storm water collection system that includes BMPs to mitigate any increases in runoff to the city's collection system. The discharge of polluted runoff from the site is not expected to be greater than what is expected under existing conditions. Therefore, impacts would be less than significant.

iv. Impede or redirect flood flows?

Construction and Operation

Less Than Significant Impact. According to the FEMA FIRM Panel No. 06085C00671, effective May 18, 2009, the project site is located within Zone AO. Zone AO is defined as "areas subject to inundation by one-percent annual chance shallow flooding, usually sheet flow on sloping terrain, where average depths are between one and three feet". The project site is also not within an area mapped as vulnerable to sea level rise in the National

Oceanic and Atmospheric Administration's Digital Coast, Sea Level Rise Viewer (NOAA 2020).

In addition, the proposed project would not be expected to add significantly to the existing potential of the site to impede or redirect flood flows because the topography in the general vicinity of the site is flat with no restriction to flow. Therefore, significant obstruction of floods is not expected from the proposed project and the impacts would be less than significant.

d. Would the project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Construction and Operation

Less Than Significant Impact. Though the site is located near Lower Penitencia and Coyote Creeks, these waterways do not pose a likely flood risk. The project site is located within Zone AO. Also, the project site is not within an area mapped as vulnerable to sea level rise in the National Oceanic and Atmospheric Administration's Digital Coast, Sea Level Rise Viewer (NOAA 2020).

The southwest corner of the project site is located within the Anderson Dam failure inundation zone. The California Division of Safety of Dams is responsible for inspecting dams on an annual basis to ensure the dams are safe, performing as intended and not prone to developing problems. As part of its comprehensive dam safety program, the SCVWD routinely monitors and studies the condition of each of its ten dams, including Anderson Dam. The City of San José's General Plan concludes that new development and redevelopment under the General Plan could result in placement of new development in Special Flood Hazard Areas and dam failure inundation zones; however, implementation of the city's policies and regulations would substantially reduce flooding and drainage hazards (SCVWD 2016).

The project site is not located near a large body of water, the ocean, or steep slopes. Due to the location of the proposed project site, it would not be subject to inundation by seiche, tsunami, or mudflow. Additionally, according to the California Emergency Management Agency the site is not within a tsunami inundation zone (CEMA 2009).

In the unlikely event of a flood, release of on-site pollutants would be prevented by the SWPPP, Worker Environmental Training, a Spill Prevention, Control, and Countermeasure Plan, a Hazardous Materials Business Plan, and through an emergency spill response program. All these measures would work together to help keep potential pollutants properly contained. Therefore, the impacts would be less than significant.

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Construction and Operation

Less Than Significant Impact. The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the local water quality control plan. The project would comply with the Basin Plan by implementing the requirements of the Construction General Permit, preparation of a construction SWPPP, and through the implementation of post-construction BMPs, as described in criteria "a" above. This impact would be less than significant.

SCVWD developed a groundwater management plan for the Santa Clara and Llagas Subbasins that is intended to be functionally equivalent to a GSP. The information contained in the SCVWD groundwater management plan is used to inform the city of San José's UWMP about groundwater supplies. Therefore, it is reasonable to rely on the UWMP to evaluate how a proposed project would impact the implementation of the sustainable groundwater management plan. The City of San José's 2020 UWMP shows that it has sufficient supply to meet the project's demand of 1.0 AFY of potable water in normal and single dry year scenarios. However, the UWMP also shows that the city would have a deficit in a multiple dry year scenario that assumes that supply from SFPUC would be interrupted. Under this scenario, the city's supply from SFPUC would be interrupted if certain conditions specified in the interruptible contract between the city and SFPUC are met. If the supply from SFPUC is interrupted the city would have to replace the demand using groundwater (San José 2021).

According to the city of San José's 2020 UWMP, the groundwater basin has been managed successfully to prevent overdraft conditions. In case of a water supply shortage, the city has adopted water conservation policies to reduce demand such that available supplies are sufficient to meet demand (San José 2021). The proposed project would therefore not be expected to impede the implementation of the SCVWD's groundwater management plan. This impact would be less than significant.

4.10.3 Mitigation Measures

None required.

4.10.4 References

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4.11 Land Use and Planning

This section describes, with respect to land use and planning: the environmental setting and regulatory background of the project; and the impacts associated with construction and operation of the project.

LAND USE PLANNING Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Physically divide an established community?	☐	☐	☐	☒
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Environmental checklist established by CEQA Guidelines, Appendix G.

4.11.1 Environmental Setting

The proposed project is located on two adjacent parcels in the City of San José: 2400 Ringwood Avenue (APN 244-17-014, 6.10 acres) and 1849 Fortune Drive (APN 244-17-009, 3.68 acres) (Santa Clara County 2022). The approximately 9.78-acre site is bordered to the north by Trade Zone Boulevard, to the south by Fortune Drive, to the west by Ringwood Avenue, and to the east by other STACK data centers and an office building. The project is within an urban area consisting of commercial and industrial land uses extending to the east, west, and south of the project. Residential uses are located on the north side of Trade Zone Boulevard in the city of Milpitas.

The Ringwood Avenue property is developed with an approximately 80,000 square-foot building that is currently occupied. The Fortune Drive property is developed with an approximately 55,000 square-foot building that is currently vacant. Both buildings would be demolished under the proposed project.

The project would consist of: an advanced manufacturing building (AMB) (136,573 square feet); two data center buildings (Data Center SVY05, 220,012 square feet, and Data Center SVY06, 302,182 square feet); a parking garage (174,751 square feet); a utility substation; and an emergency backup generating facility for the data centers consisting of thirty-six 3-MW and three 1-MW diesel-fired backup generators (DayZenLLC 2021a; DayZenLLC 2022f, DayZenLLC 2022n). The data center buildings would be four stories in height, with the administrative portion of each data center building standing four stories tall. The AMB would also be four stories in height (DayZenLLC 2022k).

Regulatory Background

Federal

No federal regulations relating to land use and planning apply to the project.

State

No state regulations relating to land use and planning apply to the project.

Local

City of San José General Plan. The *Envision San José 2040 General Plan* (General Plan) shows that the project site is within an area designated as Transit Employment Center (TEC) on the General Plan land use map. The project site is also located within the Lundy/Milpitas BART Employment Area, a Planned Growth Area for employment (figure on page 30 of San José 2022a). The General Plan also includes land use policies pertaining to the project, discussed later in this section.

City of San José Zoning Code. The project site is in the Industrial Park (IP) zoning district. The City's Municipal Code includes development standards for parcels in the Industrial Park zoning district, including minimum side, front, and rear setbacks and maximum height, discussed later in this section.

4.11.2 Environmental Impacts

a. Would the project physically divide an established community?

Construction and Operation

No Impact. The project would occupy a developed site that does not serve as a link between communities. All construction, except for two transmission line extensions, would take place on the two parcels that comprise the project site. No roadways or sidewalks would be obstructed, and therefore, the project would not prevent pedestrian, bike, or vehicular movement between different areas of the community. Operation and maintenance of the project would occur fully on site and would not physically divide the community. Therefore, no impact would occur.

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

Construction and Operation

Less Than Significant Impact. As discussed in the subsections that follow, construction and operation of the project would not conflict with land use plans or policies such that significant environmental impacts would occur. Impacts would be less than significant, as discussed below.

City of San José General Plan Land Use Designation. Part of the purpose of adopting a general plan is to avoid or mitigate environmental impacts. Project consistency with general plan policies helps ensure that environmental impacts are minimized.

The City of San José's General Plan land use designation for the project site is TEC. The General Plan states that this designation "… is applied to areas planned for intensive job growth because of their importance as employment districts to the City and high degree of access to transit and other facilities and services... Uses allowed in the Industrial Park [IP] [land use] designation are appropriate in the Transit Employment Center [land use] designation, as are supportive commercial uses" (San José 2022a). The uses allowed under the IP General Plan land use designation, and therefore also under the TEC General Plan land use designation, include research and development, manufacturing, assembly, testing, and offices, but only those uses for which any related hazards or nuisances can be mitigated through design controls (San José 2022a).

The project's proposed AMB is an allowed use in the TEC General Plan land use designation, as it would involve manufacturing and could be developed to avoid the creation of unmitigated hazardous or nuisance impacts. (See Sections **4.3 Air Quality**, **4.9 Hazards and Hazardous Materials**, **4.13 Noise**, and **4.17 Transportation** of this environmental impact report for more information.) In its preliminary review of the project, the City of San José stated that the AMB is the part of the project most consistent with the TEC land use designation and should be developed and used to facilitate the most intense employment uses possible (DayZenLLC 2021e Appendix J).

The other components of the project (data centers, back-up generators, and a substation) are not listed as either allowed or prohibited uses in the TEC General Plan land use designation. However, they are sometimes allowed in the TEC zoning district with certain permits (discussed below), which implies that they can be compatible with the TEC General Plan land use designation.

The General Plan allows a maximum floor-area-ratio (FAR) of 12.0 for properties designated as TEC, and buildings can have 4 to 24 stories (San José 2022a). The project's total floor area is calculated by first adding the floor areas[1] of each of the following project structures:

- AMB (136,573 square feet)
- Data Center SVY05 (220,012 square feet)
- Data Center SVY06 (302,182 square feet)

1 The applicant provided revised floor areas for the project structures in Data Request Set 1 Responses (DayZenLLC 2022f).

- Parking Structure[2] (174,751 square feet)

The sum of these floor areas is 833,518 square feet. The total project site area is approximately 9.78 acres, or approximately 426,017 square feet. This gives an FAR of approximately 1.96. This FAR is below the maximum of 12.0 for properties designated TEC under the General Plan and is therefore in compliance with the FAR allowed by the General Plan. Also, the proposed AMB and data centers are four stories in height, and therefore within the 4 to 24 stories range provided by the General Plan for the TEC land use designation.

For these reasons, the project would be consistent with the General Plan land use designation of TEC.

City of San José Zoning Ordinance. The City's current zoning designation for the project site is Industrial Park (IP), which allows uses such as light and medium manufacturing and assembly, research and development, and commercial support.

The City of San José recommends that the applicant apply to the City for a rezone of the project properties from the IP zoning district to the Transit Employment Center – Planned Development Zoning District, or TEC (PD) (CEC 2022i; DayZenLLC 2022s). There are two reasons for this recommendation. The first is that the rezone would result in a base zoning designation of TEC, which would be consistent with the General Plan land use designation of TEC, unlike the current IP zoning designation. The second is that the PD overlay would allow the project applicant to propose development standards tailored to meet the needs of the project, including the applicant's desire for reduced parking, and would allow the new data center use (discussed more below). To obtain the rezone to TEC (PD), the applicant would need to submit a general development plan for the site to the City of San José (San José 2022b Section 20.10.070).

The new TEC base zoning designation would allow the manufacturing building by right, as light and medium manufacturing and assembly are permitted uses under this designation. It would also allow the back-up generators by right, on the condition that they would not exceed noise and air quality standards. The substation, which is a utility facility, would be allowed with a conditional use permit. Data centers may be allowed in the TEC zone with a special use permit, but only if located in existing buildings with a valid certificate of occupancy, which is not the case for this project (San José 2022b Section 20.50.010, Table 20-110). With the new PD zone overlay, however, the applicant could obtain approval of a PD permit from the City in lieu of all these use permits, and the data center use would be allowed with approval of a PD permit for the particular proposed development of the site. The PD permit would need to conform with the

2 Above-grade parking garages are included in the floor area, according to Section 20.200.412 of the San José Municipal Code.

applicant's general development plan for the site approved as part of the rezone to TEC-PD (San José 2022b, Section 20.10.070; DayZenLLC 2021e Appendix J).

The City of San José Municipal Code provides the following details about the PD zone overlay in Section 20.60.040 of the Zoning Code:

"A. Except where a planned development permit has been implemented, the regulations for development, signs, off-street parking and off-street loading applicable to its base district zoning shall apply to all property located in territory in the planned development district.

B. When a PD permit has been implemented, the provisions of such permit shall prevail over the regulations applicable to the base district zoning of the property. No structure, facility, improvement or sign of any kind shall be constructed upon such property except in strict compliance with all provisions of such PD permit. In particular:

1. No structure, facility, improvement or sign shall be constructed upon such property except the particular structures, facilities, improvements, and signs specified in such permit.

2. Each structure, facility, improvement or sign shall have the exact height, floor area, and dimensions specified for it in such permit.

3. Each structure or facility used for off-street parking and off-street loading shall have the exact number of off-street parking and off-street loading spaces, and other areas, specified for it in such permit.

4. Each structure, facility, improvement or sign shall be constructed at the particular location and cover the exact surface area designated for it in such permit.

5. Each structure, facility, improvement and sign shall be constructed and maintained in strict compliance with all conditions of the PD permit." (San José 2021, section 20.60.040)

As part of the applicant's consultation with the City, the applicant provided proposed development standards for the proposed new TEC (PD) zoning designation of the project site (DayZenLLC 2022k; DayZenLLC 2022x). The applicant's PD permit from the City would need to comply with these standards. These proposed development standards are:

Setbacks:

- Front building setback: 15 feet
- Front parking setback: 25 feet
- Side building setback: 0 (or 25 feet from residential uses)
- Side parking setback: 0 (or 25 feet from residential uses)
- Rear building setback: 0 (or 25 feet from residential uses)
- Rear parking setback: 0 (or 25 feet from residential uses)

Maximum Building Height: 85 feet[3]

Parking Space Requirements:

- Manufacturing Building: 1 per 575 square feet of floor area
- Data Centers: 1 per 5,300 square feet of floor area

Bicycle Parking Requirements:

- Manufacturing Building: 1 per 5,000 square feet of floor area
- Data Centers: 1 per 5,000 square feet of office/meeting/technician workspace, plus 1 for every 50,000 square feet of floor area, or fraction thereof, devoted to computer equipment space

The project would meet the above setback, height, and parking standards that the applicant proposed for the TEC (PD) rezone. These standards are similar to those of the TEC base zoning district that corresponds with the site's General Plan land use designation of TEC. Among the differences is the applicant's proposed maximum height for the TEC (PD) zone, 85 feet, which is lower than the maximum of 120 feet for the base TEC zoning district. Also, the applicant's proposed vehicle parking standards for the TEC (PD) zone would allow a reduction in required parking compared to the base TEC zoning district. The project would provide 339 parking spaces, less than the 523 required under the base TEC zoning district. The purpose of a PD overlay is to allow project-specific development standards such as these to meet the needs of a proposed project. However, in accordance with Mitigation Measure **TRANS-1** (**Section 4.17 Transportation**), the applicant must also implement a Transportation Demand Management Plan to support the parking reduction, as required by Chapter 20.90 of the City of San José Municipal Code.

The City stated, in its preliminary review of the project, that the new TEC (PD) zone should facilitate employment associated with the AMB as much as possible. Specifically, the City stated in its letter dated July 2, 2021 (DayZenLLC, Appendix J 2021e):

*"Due to the site's location within the Transit Employment Center, it is imperative that the employment-focused manufacturing building remain a focal use of the site. It is recognized that the 135,000 square feet [*now 136,573 square feet with a project revision] *of manufacturing space replaces the existing square footage of the site, and it will be important that this amount of space dedicated to an employment use is not diminished; where possible it is also encouraged to be expanded. This manufacturing space must also be designed to facilitate employment uses to the highest extent feasible. To demonstrate a high level of employment use at the site, future application materials should include a narrative outlining the incorporated design measures that will facilitate a viable advanced*

3 The maximum building height for this project is 83 feet (DayZenLLC 2022y) when using the definition of building height in Section 17.82.210 the City of San Jose Municipal Code. However, certain elements of the project are higher than this, including building projections and transmission infrastructure, as discussed in **Section 4.1 Aesthetics** of this document. As discussed in the **Aesthetics** section of this document, the heights of all project elements comply with regulations in the City of San Jose Municipal Code.

manufacturing building. These measures should be incorporated as development standards to the PD Zoning to the extent possible. Additionally, because the advanced manufacturing building is a cornerstone of the General Plan conformance, staff will need to specify in the zoning that the site cannot be built without the advanced manufacturing building proceeding at the forefront of construction… The proposed [square footage] of manufacturing space should be identified as a minimum square footage in the development standards, and any square footage that is potentially adaptive to manufacturing... should be analyzed and identified as the maximum in a range of allowed manufacturing space on the site."

The applicant will coordinate with the City of San José to ensure that the proposed rezone and PD permit comply with the City's requirements, including the focus on employment uses within the TEC General Plan land use designation. As part of this, the applicant will need to designate in their proposed development standards that the proposed AMB square footage is the minimum allowed for the use. With City approval of the rezone and the PD permit, as well as implementation of **TRANS-1**, the project would be consistent with the uses and development standards allowed on the site by the City of San José Zoning Ordinance.

General Plan Policies. The General Plan contains land use policies pertaining to the project. Below is a list of these policies, along with a discussion of project conformance.

- *Implementation Policy IP-1.3: Ensure that proposals for redevelopment or significant intensification of existing land uses on a property conform to the Land Use/Transportation Diagram. Because the Diagram designation identifies the City's long-term planned land uses for a property, non-conforming uses should transition to the planned use over the timeframe of the Envision General Plan. Allow improvements or minor expansions of existing, non-conforming land uses providing that such development will contribute to San José's employment growth goals or advance a significant number of other Envision General Plan goals.*

  The AMB component of the project ensures the project conforms with the TEC land use designation, which allows manufacturing uses. Although the proposed data centers are not listed as an allowed use under the TEC land use designation, they would support technology-based employment around the region.

- *Business Growth and Retention Policy - IE-2.8: Encourage business and property development that will provide jobs and generate revenue to support city services and infrastructure.*

  The project is expected to provide employment for approximately 198 people (70 employees for the SVYDC and 128 for the AMB). The number of project employees is similar to the number of employees currently working at the site, which is approximately 200 people at the Olympus building and none at the vacant Fortune Drive property. The AMB would also provide jobs and generate revenue by serving as "a state-of-the-art incubation space that includes training facilities to develop employees for the region's growing demand. The primary objective of the AMB is to

serve specific demand within the San José region for highly trained employees with the technical skills necessary for the growing demand for Advanced Manufacturing workers" (DayZenLLC 2021a).

- *Broad Economic Prosperity Policy – IE-6.2: Attract and retain a diverse mix of businesses and industries that can provide jobs for the residents of all skill and education levels to support a thriving community.*

  The AMB would serve as an incubation space for new manufacturing businesses to grow and provide employment. It would also support training future employees in the technical skills needed for working in advanced manufacturing, thus supporting local manufacturing businesses.

- *Fiscal Sustainability Policy – FS-4.6: Consider conversion from one employment land use to another except for Light Industrial or Heavy Industrial land uses, where the conversion would retain or expand employment capacity and revenue generation, particularly for intensification on-site if the proposed conversion would result in a net increase in revenue generation.*

  The applicant has proposed, in accordance with the City's comments, to change the zoning designation on the site from IP to TEC (PD) to be consistent with the General Plan land use designation of TEC. The PD overlay would allow the applicant to propose development standards tailored to meet the needs of the proposed development. The new employment land use would involve approximately the same number of employees as the current use, as discussed earlier, and would therefore retain employment capacity. The data centers and AMB would also support and create businesses in the area, thus generating revenue.

The project is consistent with the above relevant General Plan policies, and there would be no significant impacts from conflicts with these policies.

With the planned rezone of the project site from IP to TEC (PD), and the applicant's obtainment of a PD permit, the project would have less than significant impacts due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

4.11.3 Mitigation Measures

None required.

4.11.4 References

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DayZenLLC 2021e – DayZenLLC (DayZenLLC). (TN 240912). STACK Backup Generating Facility Application for SPPE Appendices H I J and K, dated December 10, 2021. Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-SPPE-02

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DayZenLLC 2022k – DayZenLLC (DayZenLLC). (TN 245892). STACK TZP Responses to CEC Data Request Set 2 – Part I, dated September 7, 2022. Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-SPPE-02

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DayZenLLC 2022x – DayZenLLC (DayZenLLC). (TN 247485). Revised Supplemental Response to Data Request 73, dated November 16, 2022. Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-SPPE-02

DayZenLLC 2022y – DayZenLLC (DayZenLLC). (TN 247506). STACK TZP Architectural Elevation Drawings, dated November 17, 2022. Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-SPPE-02

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San José 2022b – City of San José (San José). San José Code of Ordinances. Accessed on May 25, 2022. Available online at: https://library.municode.com/ca/san_José/codes/code_of_ordinances?nodeId=TIT20ZO

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4.12 Mineral Resources

This section describes the environmental setting and regulatory background and discusses the impacts associated with the construction and operation of the project with respect to mineral resources.

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

Environmental checklist established by CEQA Guidelines, Appendix G.

4.12.1 Environmental Setting

Information on mineral resources was compiled from published literature, maps, and a review of aerial photographs. Impacts to mineral resources from project construction and operational activities were evaluated qualitatively based on the area occupied by the project, site conditions, expected construction practices, anticipated materials used, and the locations and duration of project construction and operational activities.

The project site is located in the city of San José within Santa Clara County (DayZenLLC 2021a). It is in an area identified as Mineral Resource Zone 1 (MRZ-1) for aggregate materials by the State of California (Key 2021). MRZ-1 refers to an area where available geologic information indicates that no significant mineral deposits are present or where it is judged that little likelihood for their presence exists (Key 2021). The project site is located on previously disturbed alluvium that has been previously developed. The project site and surrounding area are not known to support significant mineral resources of any type. Other than the Communication Hill Area, located about 14.5 miles south-southeast of the project site, which contains mineral deposits that are of regional significance as a source of constriction aggregate materials, the city of San José does not have significant mineral deposits as defined by the Surface Mining and Reclamation Act of 1975 (Pub. Resources Code, § 2710 et seq., SMARA) (San José 2020). The Division of Mine Reclamation's list of mines, referred to as the Assembly Bill (AB) 3098 List and regulated under SMARA (Pub. Resources Code, § 2717), identifies four other facilities in Santa Clara County, with the closest being the Curtner Quarry located about 5.8 miles northeast of the project site (DOC 2022).

Regulatory Background

Federal

No federal regulations related to mineral resources apply to the project.

State

Surface Mining and Reclamation Act. SMARA requires that the State Geologist classify land into MRZ or Scientific Zones according to the known or inferred mineral potential of the land (Pub. Resources Code, § 2710 et seq.).

MRZs are defined as the following (Key 2021):

- MRZ-1: Areas where available geologic information indicates that little likelihood exists for the presence of significant construction aggregate resources.
- MRZ-2: Areas where geologic information indicates the presence of significant construction aggregate resources.
- MRZ-3: Areas containing known or inferred construction aggregate resources of undetermined mineral resource significance.
- MRZ-4: Areas where available geologic information is inadequate to assign to any other mineral resource zone category.

Local

No local regulations related to mineral resources apply to the project.

4.12.2 Environmental Impacts

a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?

Construction and Operation

No Impact. The project site is in an area that does not contain any known or designated mineral resources. Therefore, the project would not result in the loss of availability of a known mineral resource.

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

Construction and Operation

No Impact. The project site is in an area that does not contain any known or designated mineral resources. Therefore, the project would not result in the loss of availability of a locally important mineral resource recovery site.

4.12.3 Mitigation Measures

None required.

4.12.4 References

DayZenLLC 2021a – DayZenLLC (DayZenLLC). (TN 240910). STACK Backup Generating Facility Application for SPPE, dated December 10, 2021. Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-SPPE-02

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4.13 Noise

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the or project with respect to noise and vibration.

NOISE Would the project result in:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b. Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐

Environmental checklist established by CEQA Guidelines, Appendix G.

4.13.1 Environmental Setting

The project area consists primarily of office, commercial, and light industrial land uses. The project site zoning is Heavy Industrial. To the east of the project site is an office building. To the west and south of the project site are office and commercial uses located along Fortune Drive and Ringwood Ave. The nearest noise sensitive receptors are a church (west of the project site) and residences located approximately 200 feet from the northern project boundary across Trade Zone Boulevard. Trade Zone Boulevard is the divide between the city of San José and the city of Milpitas. Norman Y. Mineta international Airport is located approximately 3 miles southwest of the project site. The predominant ambient noise is attributed to vehicular traffic along nearby roads with Trade Zone Boulevard being the greatest contributor.

Ambient noise monitoring assessment was conducted in the areas surrounding the project site between Wednesday, September 29, 2021 and Friday, October 1, 2021. The survey included two long-term measurements (at monitoring locations LT-1 and LT-2) and two short term measurements (at monitoring locations ST-1 and ST-2) (DayzenLLC 2022b). LT-1 was located approximately 50 feet north of the centerline of Fortune Drive at the southern end of the project site. Long-term measurement LT-2 was made approximately

40 feet north of the centerline of Trade Zone Boulevard. This measurement location was in the city of Milpitas and adjacent to the residential area nearest the project site.

Hourly average noise levels at LT-1 ranged from 52 to 64 dBA L_{eq}[1] during the day, with an overall average of 58 dBA L_{eq}, and from 49 to 61 dBA L_{eq}) at night, with an overall average of 55 dBA L_{eq}. Hourly average noise levels at LT-2 ranged from 69 to 74 dBA L_{eq} during the day, with an overall average of 72 dBA L_{eq}, and from 63 to 73 dBA L_{eq} at night, with an overall average of 68 dBA L_{eq}.

Short-term measurements were also taken at two locations, ST-1 and ST-2. ST-1 was located near the LT-2 measurement location at 315 Trade Zone Boulevard and ST-2 was located west of the project site near 2290 Ringwood Avenue. The short-term measurements were 10 minutes in duration, taken between 1:10 and 1:20 p.m. on Wednesday, September 29, 2021. The 10-minute L_{eq} noise levels at ST-1 and ST-2 were respectfully 69 dBA and 67 dBA.

Regulatory Background

Thresholds of Significance

The California Environmental Quality Act (CEQA) Guidelines state that a project would normally be considered to have a significant impact if noise levels conflict with adopted environmental standards or plans, or if noise levels generated by the project would substantially increase existing noise levels at noise-sensitive receivers on a permanent or temporary basis. CEQA does not define what noise level increase would be substantial. Generally, an increase of 3 decibels on the A-weighted scale (dBA) is noticeable and an increase of 5 dBA is distinct. A noise level increase of more than 5 dBA would be considered potentially significant. Some local government entities, such as the city of San José, consider a 5-dBA increase as an impact if the resulting noise level remains within the maximum acceptable for a land use designation, while a 3-dBA increase would be an impact if the resulting noise level equals or exceeds the allowable maximum for the land use zone (San Jose 2020). Other factors, such as the frequency of occurrence of the noise and time of day/night it occurs, are also commonly considered in determining if such an increase is clearly significant or not.

There are no adopted thresholds for an increase in dBA level to be considered a significant impact for construction activities. Noise impact due to construction activities is considered to be less than significant if the construction activity is temporary and the use of heavy equipment and noisy activities is limited to daytime hours. Based on staff's experience with community reaction to increases of noise due to construction, an increase of 10 dBA or more during the day can trigger a community reaction (e.g., a receptor hearing a 10 dBA increase due to construction noise could consider this noise negatively) and can warrant additional measures to address impacts. An increase of 10 dBA corresponds to

1 L_{eq} is a measurement of average energy level intensity of noise over a given period of time.

doubling of loudness or dBA level and is generally considered to be the starting point at which significant impacts may occur. The exact level of noise resulting from construction is very difficult to identify because it fluctuates based on many factors over the course of a week, day, or even hour. It also depends on other factors, such as intervening structures, land topography, and land cover. For example, intervening structures would block or impede sound waves, and undulating topography and land roughness would play a role in the attenuating the propagation of sound waves. Therefore, performance standards (i.e., a complaint and redress process) are ultimately used as a backstop measure to address any impacts that are perceived by the community.

Local

City of San José General Plan. *Envision San José General Plan 2040* (General Plan) describes the levels of exterior noise considered compatible for various land uses to guide land use planning decisions. The city's General Plan also considers a 5 dBA increase in ambient noise while it remains within allowable limits a significant impact, but if the increase would result in the noise level exceeding the allowable limit, then a 3 dBA increase is considered a significant impact. The General Plan includes policies applicable to all development projects in San José (San José 2022). The city's noise and land use compatibility guidelines are shown in **Table 4.13-1**.

TABLE 4.13-1 LAND USE COMPATIBILITY GUIDELINES FOR COMMUNITY NOISE IN SAN JOSÉ

Land Use Category	Maximum Acceptable Day-night Composite Noise Value (DNL or L_{dn}) in Decibels (dBA)
1. Residential, Hotels and Motels, Hospitals and Residential Care	60
2. Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds	65
3. Schools, Libraries, Museums, Meeting Halls, Churches	60
4. Office Buildings, Business Commercial, and Professional Offices	70
5. Sports Arena, Outdoor Spectator Sports	70
6. Public and Quasi-Public Auditoriums, Concert Halls, Amphitheaters	70[a]

Source: Table EC-1, San José 2022.
Note: [a] Conditionally acceptable. Specified land use may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features included in the design

In addition, the General Plan lists the following policies to control noise and vibration pollution impacts:

- EC-1.1: Locate new development in areas where noise levels are appropriate for the proposed uses, taking into consideration federal, state and city noise standards and guidelines.
- EC-1.2: Minimize the noise impacts of new development on land uses sensitive to increased noise levels by limiting noise generation and by requiring use of noise

attenuation measures such as acoustical enclosures and sound barriers, where feasible.

- EC-1.3: Mitigate noise generation of new non-residential land uses to 55 dBA L_{dn} at the property line when located adjacent to existing or planned noise sensitive residential and public/quasi-public land uses.
- EC-1.6: Regulate the effects of operational noise from existing and new industrial and commercial development on adjacent uses through noise standards in the City's Municipal Code.
- EC-1.7: Require construction operations within San Jose to use the best available noise suppression devices and techniques and limit construction hours near residential use per the City's Municipal Code. The City considers significant construction noise impacts to occur if a project located within 500 feet of residential uses or 200 feet of commercial or office uses would:
    - Involve substantial noise generating activities (such as building demolition, grading, excavation, pile driving, use of impact equipment, or building framing) continuing for more than 12 months. For such large or complex projects, a construction noise logistic plan that specifies hours of construction, noise and vibration minimization measures, posting or notification of construction schedules, and designation of a noise disturbance coordinator who would respond to neighborhood complaints will be required to be in place prior to the start of construction and implemented during construction to reduce noise impacts on neighboring residents and other uses.
- EC-2.3: Require new development to minimize vibration impacts to adjacent uses during demolition and construction. For sensitive historic structures, a vibration limit of 0.08 inches per second (in/sec) peak particle velocity (PPV) will be used to minimize the potential for cosmetic damage to a building. A vibration limit of 0.20 in/sec PPV will be used to minimize the potential for cosmetic damage at buildings of normal conventional construction.

City of San José Municipal Code. Title 20 (Zoning), Section 20.50.300 specifies allowable uses and activities for areas zoned or used for industrial purposes. Noise limits at the property line of a project are not allowed to exceed 55 dBA (anytime) if a residential area is adjacent to any of the project boundaries; 60 dBA if adjacent uses are commercial with no residential areas; and 70 dBA if all adjacent uses are industrial.

The Municipal Code also restricts construction hours for projects within 500 feet of a residential area to the hours of 7:00 a.m. to 7:00 p.m. on Monday through Friday, unless otherwise expressly allowed in a development permit or other planning approval. The city's Municipal Code does not establish quantitative noise limits for demolition or construction activities occurring in the city (San José 2021).

City of Milpitas General Plan. Because the project site is located at the boundary between the city of San José and the city of Milpitas, it is appropriate to take into

consideration the city's regulations related to noise generation and abatement. The city of Milpitas General Plan 2040, adopted on March 9, 2021, includes goals, policies, and actions that seek to reduce community exposure to excessive noise levels through the establishment of noise level standards for a variety of land uses (Milpitas General Plan 2022). Goal N-1 aims at preserving a nuisance-free noise environment for existing and future land uses by minimizing exposure to harmful and excessive noise levels. Goal N-1 includes the following policies that are applicable to the Stack Trade Zone project:

- N 1-1. Consider the noise compatibility of existing and future development when making land use planning decisions. Require development and infrastructure projects to be consistent with the land use compatibility standards contained in Tables N-1 and N-2 to ensure acceptable noise exposure levels for existing and future development.
- N 1-2. Require new development to mitigate excessive noise to the standards indicated in Tables N-1 and N-2 through best practices, including building location and orientation, building design features, placement of noise-generating equipment, placement of noise-tolerant features between noise sources and sensitive receptors, and use of noise-minimizing materials.
- N 1-6. For projects that are required to prepare an acoustical study to analyze noise impacts, the following criteria shall be used to determine the significance of those impacts:
    - *Stationary and Non-Transportation Noise Sources*
        - A significant impact will occur if the project results in an exceedance of the noise level standards contained in this element, in instances where the ambient noise level is already above the standards contained in this element, a significant impact will occur if the project results in an increase in ambient noise levels by more than 3 dBA. This does not apply to temporary construction activities.
- N 1-8. Require construction activities to comply with standard best practices to reduce noise exposure to adjacent sensitive receptors.
- N 1-12. Require non-transportation related noise from specific noise sources to comply with the standards shown in Table N-2.

TABLE N-2 STATIONARY (NON-TRANSPORTATION) NOISE SOURCE STANDARD

Land Use Receiving the Noise	Hourly Noise-Level Descriptor	Exterior Noise-Level Standard (dBA)	
		Daytime (7 am – 10pm)	Nighttime (10 pm – 7 am)
Residential	L_{eq}	55	45
	L_{max}	70	65

If the existing ambient noise levels are in excess of these limits, ambient levels plus 3 dBA would replace these limits.

- N 1-15. Temporary emergency operations or emergency equipment usage authorized by the City shall be exempt from noise standard criteria set by this element.
- Action N-1d. During the environmental review process, determine if proposed construction will constitute a significant impact on nearby sensitive receptors and, if necessary, require mitigation measures in addition to the standard best practice controls. Suggested best practices for control of construction noise include:
  - Noise-generating construction activities, including truck traffic coming to and from the construction site for any purpose, shall be limited to between the hours of 7:00 am and 7:00 pm. No construction shall occur on National holidays.
  - All equipment driven by internal combustion engines shall be equipped with mufflers, which are in good condition and appropriate for the equipment.
  - The construction contractor shall utilize "quiet" models of air compressors and other stationary noise sources where technology exists.
  - At all times during project grading and construction, stationary noise-generating equipment shall be located as far as practicable from sensitive receptors and placed so that emitted noise is directed away from residences.
  - Unnecessary idling of internal combustion engines shall be prohibited for a duration of longer than five minutes.
  - Construction staging areas shall be established at locations that will create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction activities, to the extent feasible.
  - Neighbors located adjacent to the construction site shall be notified of the construction schedule in writing.
  - The construction contractor shall designate a "noise disturbance coordinator" who will be responsible for responding to any local complaints about construction noise. The disturbance coordinator shall be responsible for determining the cause of the noise complaint (e.g., starting too early, poor muffler, etc.) and instituting reasonable measures as warranted to correct the problem. A telephone number for the disturbance coordinator shall be conspicuously posted at the construction site.

4.13.2 Environmental Impacts

a. Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction

Less Than Significant with Mitigation Incorporated. Prior to construction activities on the project site, demolition of existing structures and foundations and removal of underground utilities would be required. Demolition and construction activities would last for about 35 months (DayzenLLC 2022b) and would utilize equipment that could generate noise levels that exceed ambient noise, such as bulldozers and jackhammers. Typical equipment used for construction and demolition of similar projects produces sound pressure levels between 82 (for trenching and foundation) and 91 dBA (for demolition) at 50 feet. Sound pressure level is the pressure generated by sound waves as perceived by the human ear. It is affected by the distance from the sound source or sound power level from the source. Sound power level is the amount of energy generated from a sound source similar to the wattage of a light bulb. Equipment manufacturers often provide sound levels in either sound pressure level or sound power level; however, if the latter is provided, sound pressure level can be converted from sound power level do determine the sound perceived by the human ear.

The project application does not rule out the possibility that impact pile driving might be used at the site. However, if impact pile driving is used it would be for short durations to install deep foundation piles. Impact pile installation can generate an equivalent hourly noise level, L_{eq}, of 95 dBA 50 feet away.

The city of San José's Municipal Code does not establish construction noise sources in its prescribed noise level limits, but limits construction and demolition activities within 500 feet from residential units to occur during the daytime hours of 7:00 a.m. to 7:00 p.m. Monday through Friday and prohibits construction work on weekends at sites within 500 feet of residential uses unless permission is granted with a development permit or other planning approval.

Sound levels from stationary noise sources attenuate in an inverse exponential pattern at a rate of 6 dBA for every doubling of distance. Construction activities of the advanced manufacturing building (AMB), which would be located in the northern portion of the project site, could generate noise perceived as significant at the closest residences located about 200 feet from the center of this location. The highest hourly equivalent noise level of 95 dBA (from impact pile driving) attenuates to a noise level of approximately 83 dBA at these residences. Sound levels at these residences would increase by 11 dBA above the average long-term measured noise levels at LT-2 (72 dBA) representing the location

of these residences, which would be 9 dBA above the peak noise level of 74 dBA. This conservative assessment assumes that the loudest activities would occur right at the northern edge of the site. However, the majority of construction activities would occur further away from the boundary, which would result in lower noise level exposure at these residences.

At the office building located about 250 feet from the center of the eastern project boundary, the highest hourly equivalent noise level of 95 dBA (from impact pile driving) attenuates to an exterior level of approximately 81 dBA. This is an increase of 9 dBA above the average ambient level along Trade Zone Blvd (72 dBA) and about 7 dBA above the peak long-term measurement at LT-2 (representing the location of this office building). The commercial buildings located along Ringwood Avenue and the office buildings located east of the project site are about the same distance from the center of the project site. Therefore, the highest project noise level due to construction and demolition activities would be approximately 81 dBA. While there were no long-term noise measurements taken along Ringwood Avenue, the short-term noise survey at ST-2 showed that the ambient noise level in that area is quite similar to the area north of the project site near LT-2. Thus, the increase in noise levels due to demolition and construction activities would be similar, or about 9 dBA above the average ambient noise level.

As discussed above, an increase of 10 dBA or more during the day can be perceived as noisy (triggering a community reaction) and warrant additional measures to address noise levels. An increase of 10 dBA corresponds to doubling of loudness or dBA level and is the starting point for significant impacts. While some construction activities could result in potential significant impacts, those impacts would be noticeable only when the activity takes place at the project site portion closest to the residences. However, for the majority of demolition and construction duration, the noise generating activities would be farther away from the northern project boundary, and so the increase in noise levels would be less. Thus, the increased noise level would not result in a significant impact—the loudest construction activities would be temporary and would last for short periods.

City of San José's General Plan Policy EC-1.7 requires that large or complex projects within 500 feet of residential land uses or within 200 feet of commercial land uses or offices involving substantial noise generating activities that last more than 12 months should prepare a construction noise logistics plan that specifies hours of construction, noise and vibration minimization measures, posting or notification of construction schedules, and designation of a noise disturbance coordinator who would respond to neighborhood complaints. Such policy is required to be in place prior to the start of construction and implemented during construction to reduce noise impacts on neighboring residents and other uses.

Likewise, Policy N 1-8 of the City of Milpitas General Plan requires construction activities to comply with best standard practices to reduce noise exposure to surrounding sensitive uses as specified in Action N-1d.

Moreover, performance standards (i.e., a complaint and redress process) are ultimately used as a backstop measure to address any impacts that might be perceived by the community. The applicant proposes mitigation measures that require a complaint and redress process to be implemented to ensure construction noise impacts would not be significant, as perceived by the community. Also, the applicant's mitigation measures include limits to construction work to daytime hours, several appropriate measures to reduce and control construction-related noise, and requires notifying project neighbors of noisy construction schedule. Staff reviewed the applicant's measures and concludes the measures are sufficient to reduce project construction noise. With staff proposed **NOI-1**, the project's construction noise impact would be reduced to less than significant.

Operation and Maintenance

Less Than Significant Impact. The noise survey conducted on behalf of the project applicant found that existing noise levels in the project vicinity are already higher than the cities' adopted thresholds. Staff also observed elevated noise levels during a visit to the project site on September 29, 2022. Modeled noise levels due to project operation show that the project noise would be much less than the existing ambient noise levels as described in the following discussion. If the modeled impacts would be close to the existing levels, the ambient noise levels are likely to increase, but since they would be much lower, the project noise would not be noticed by the sensitive receptors in the project vicinity. Additionally, sound pressure levels from multiple equipment are not additive; however, follow the logarithmic scale. For example, if the sound level of a generator and chiller differ by 1 dBA, the cumulative sound level would be, at most, 3 dBA higher than the noisiest sounding equipment.

The generators would provide backup power to the data center buildings and AMB during emergency outages when electric service is interrupted. Sources of operational noise for the project would include the 36 3-MW diesel-fueled backup generators, stacked in two layers and the rooftop air-cooled chillers. Also, there would be three 1-MW diesel-fueled house generators, one at each of the three buildings. Fifteen of the 3-MW generators and one of the house generators would be located in a generator yard adjacent to the southern side of the northern data center building, SVY05, referred to as the northern yard. The remaining 21 backup generators and one of the house generators would be in the southern generator yard adjacent to the northern side of the southern data center building, SVY06. The third house generator would be located on the western side of the AMB. The generator yards would be tucked between the two data center buildings to provide some sound shielding. It should be noted that the house generators are assumed to have the same maximum noise level as the large generators.

In addition to the backup generators, there would be 35 air cooled chillers on top of the northern data center building (SVY05) and 42 chillers on top of the southern data center building, SVY06 (DayZenLLC 2022o). A sound-attenuating enclosure designed to limit noise to 70 dBA at 23 feet would be provided for each backup generator (DayzenLLC 2022h). The generator yard would be enclosed with a 12-foot-tall sound attenuating

screen wall. In addition, a 16-foot-tall rooftop parapet would be installed on top of the data center buildings to act as a noise screen. The rooftop cooling units would be equipped with silencers to reduce noise levels by an additional 3 dBA.

The applicant performed an operational noise impact assessment on nearby receptors using the CadnaA environmental noise prediction software (DayzenLLC 2022h). The assessment modeled two conservative scenarios: 1) Heating Ventilation and Air Conditioning (HVAC) operations, when all chillers are operating at 100% load, assuming an extremely hot day, and 2) HVAC and generator testing, when all chillers are operating at 100% load concurrent with the maintenance and testing of one generator, also at 100% load. The generators selected for each sensitive receiver was selected to be the one expected to have the greatest impact on the receiver. The model assumed that the receivers are located at a height of 5 feet to represent the average height of a standing human.

Predicted noise levels at the residential property line to the north were 56 dBA during HVAC and generator testing operations, representing daytime conditions, and 51 dBA during HVAC operations alone, representing nighttime conditions. The nearest residences are located north of the project site in the city of Milpitas. Operational noise levels during both modes of operation would be above the city of Milpitas' daytime and nighttime noise limits of 55 dBA and 45 dBA at receiving residences (Table N-2), respectively (DayZenLLC 2022t); however, operational noise levels would be below the daytime and nighttime ambient sound levels of 69 dBA and 63 dBA, respectively, at these receptors (referenced by LT-2). Therefore, the generated noise from project operation would not result in a significant noise impact on nearby residences north of the project site and would comply with the city of Milpitas' General Plan.

Modeled noise levels at the interior southeast corner of the project also exceeded the relevant noise threshold (60 dBA for commercial land uses) during HVAC and generator testing operation. The noise analysis modeled several mitigation scenarios to reduce noise levels at the adjacent commercial property to 60 dBA or below during HVAC operation together with maintenance operation of a single generator.

The noise analysis concluded that a combination of mitigation measures would be implemented to reduce the noise levels due to project operation to 60 dBA or less. The mitigation measures included mitigation of noise produced by rooftop units, extension of the parapet wall on the sides of the buildings facing the commercial property, mitigation of generator exhaust noise, and addition of a noise wall along the central-eastern property line.

In addition, maintenance and testing would be scheduled only between 5 p.m. and 7 p.m. on weekdays to avoid impacts to the workers at the adjacent commercial building immediately to the east of SVY06 during work hours. This would not affect residents, since they are farther away than this commercial building, thus, the noise impact would be less. In fact, the modeled noise level showed that the noise level due to project

operation along with testing of the most impactful generator on the residences would be approximately 15 dBA less than existing daytime and nighttime ambient noise levels.

Humming noise, or white noise, from the operation of an industrial facility, such as a data center, is usually associated with either, equipment imbalance that can occur in older or poorly designed equipment, or due to the lack of noise-control features. The project, on the other hand, would be a new, state of the art facility, incorporating low-noise equipment and noise-control features. The project is not expected to generate a humming noise or any other tonal noise discernable at the nearby residences.

With implementation of the applicant's recommended noise mitigation measures to reduce the noise levels at the commercial buildings to the southeast of the project property line to 60 dBA or less, impact from project operation in terms of noise pollution would be less than significant. Project operation would not result in generation of a substantial increase in ambient noise levels in excess of the city's standards of either the city of San José or the city of Milpitas.

Temporary emergency operations or emergency equipment usage authorized by the city of San José are exempt from noise standard criteria set by the city's Municipal Code. Under emergency operation of all the generators, operational noise levels would not have a significant impact on nearby sensitive receptors since the existing ambient noise levels are quite high. It should also be noted that based on historical data, such emergency operation has occurred infrequently, and this project is not expected to be different.

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Construction

Less Than Significant Impact. This analysis relies on the vibration thresholds identified by Caltrans to determine the significance of vibration impacts related to adverse human reaction. These thresholds are consistent with local regulations. The threshold of human response begins at a PPV of 0.16 in/sec. Caltrans characterizes this as a "distinctly perceptible" event (Caltrans 2013). A level of 0.20 in/sec has been found to be annoying to people in buildings and can pose a risk of architectural damage to buildings.

Construction activities would include demolition of existing structures, foundation work, and construction of the new buildings. In general, construction activities such as drilling, use of jackhammers, rock drills, and other high-power or vibratory tools, as well as rolling stock equipment such as tracked vehicles and compactors, may generate substantial vibration in the immediate site vicinity. Jackhammers can cause a groundborne vibration rate of 0.035 in/sec at 25 feet (less than the threshold of human response) and vibratory rollers can cause a groundborne vibration of 0.21 in/sec at 25 feet, while typical vibration rate caused by impact pile driving at 25 feet is 0.64 in/sec (Caltrans 2013). However, vibration rates dissipate rapidly with distance, and the vibration rate generated by an impact pile driver drops to 0.15 in/sec at a distance of 100 feet from the source. The

closest structures to the project site boundary are residences and commercial buildings located approximately 200 and 100 feet, respectively, from the site's property line.

Therefore, use of heavy equipment on-site would not cause vibration levels above the 0.20 in/sec PPV criteria specified by General Plan Policy EC-2.3, and thus vibration impacts from project construction would be less than significant.

Operation

Less Than Significant Impact. Sources of groundborne vibration associated with project operation would include the backup generators, rooftop equipment. These pieces of equipment would be well-balanced, as they are designed to produce very low vibration levels throughout the life of a project. In most cases, even when there is an imbalance, they could contribute to ground vibration levels only in the vicinity of the equipment and would be dampened within a short distance. The proposed backup generators are equipped with specifications that ensure sufficient exhaust silencing to reduce vibration. Therefore, vibration impacts due to project operation would be less than significant.

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Construction and Operation

Less Than Significant Impact. The nearest airport to the project site is the Norman Y. Mineta San José International Airport, located approximately 3.4 miles southwest of the project site. The project site is not within the Airport Noise Zone (the 65 CNEL[2] contour, as set forth by state law) as defined in the Comprehensive Land Use Plan for the airport. The project site is surrounded with mostly office and commercial uses and the closest residence is about 200 feet to the north of the project site. The project site is not in the vicinity of a private airport and would not place sensitive land uses within the airport noise contour. Thus, the project would not combine with the airport to expose people to excessive noise levels. Thus, the noise level impacts would be less than significant.

4.13.3 Mitigation Measures

NOI-1: Pursuant to General Plan Policy EC-1.7, a construction noise logistics plan shall be prepared that specifies hours of construction, noise and vibration minimization measures, posting or notification of construction schedules, and designation of a noise disturbance coordinator who would respond to neighborhood complaints will be required

2 CNEL is the average sound level over a 24-hour period, with a penalty of 5 dBA added between 7 pm and 10 pm and a penalty of 10 dBA added for the nighttime hours 10 pm to 7 am. CNEL is frequently used in regulations of airport noise impact on the surrounding community.

to be in place prior to the start of construction and implemented during construction to reduce noise impacts on neighboring residents and other uses. Project construction operations shall use best available noise suppression devices and techniques including, but not limited to the following:

- Limit construction hours to between 7:00 AM and 7:00 PM, Monday through Friday, with no construction on national holidays, unless permission is granted with a development permit or other planning approval. No construction activities are permitted on the weekends at sites within 500 feet of a residence. Construction outside of these hours may be approved through a development permit based on a site-specific "construction noise mitigation plan" and a finding by the Director of PBCE that the construction noise mitigation plan is adequate to prevent noise disturbance of affected residential uses.
- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Prohibit unnecessary idling of internal combustion engines.
- Locate stationary noise-generating equipment such as air compressors or portable power generators as far as possible from sensitive receptors. Construct temporary noise barriers to screen stationary noise-generating equipment when located near adjoining sensitive land uses.
- Utilize "quiet" air compressors and other stationary noise sources where technology exists.
- Control noise from construction workers' radios to a point where they are not audible at existing residences bordering the project site.
- Notify all adjacent business, residences, and other noise-sensitive land uses of the construction schedule, in writing, and provide a written schedule of "noisy" construction activities to adjacent land uses and nearby residences.
- If complaints are received or excessive noise levels cannot be reduced using the measures above, erect a temporary noise control blanket barrier along surrounding building facades that face the construction sites.
- Designate a "disturbance coordinator" who would be responsible for responding to any complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint (e.g., bad muffler, etc.) and will require that reasonable measures be implemented to current the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include it in the notice sent to neighbors regarding the construction schedule. Establish a telephone number for the disturbance coordinator and post it on the construction site.

4.13.4 References

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4.14 Population and Housing

This section describes the environmental and regulatory background, and discusses impacts associated with the construction and operation of the project with respect to population and housing.

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

Environmental checklist established by CEQA Guidelines, Appendix G.

4.14.1 Environmental Setting

The project is proposed in the City of San José in Santa Clara County. Nearby cities include the cities of Fremont, Milpitas, Santa Clara, and Sunnyvale. The applicant estimates the construction and operations workers would come from the Bay Area. Staff considers that the local workers[1] from the Bay Area are not likely to temporarily (during construction) or permanently (during operations) move closer to the project. Staff considers the City of San José as the study area for population and housing-related impacts and the San Jose-Sunnyvale-Santa Clara Metropolitan Statistical Area (MSA), which covers San Benito and Santa Clara counties, as the setting for labor supply for the project.

Population Growth

The City of Santa José has an estimated land area of 180 square miles. The 2020 population for the city is 1,013,240 people (U.S. Census 2020). The Envision San José 2040 General Plan estimates a residential population of approximately 1.3 million people by 2040 (San José 2022, Chapter 1 page 61).

Association of Bay Area Governments (ABAG) data is used in **Table 4.14-1** to show household growth projections between 2015 and 2050. ABAG divides the Bay Area counties into sub-county areas, called superdistricts. The superdistricts are combinations of cities, towns, and unincorporated areas that represent a more localized pattern of

1 Workers with a greater commute would be considered non-local and would tend to seek lodging closer to the project site (temporarily during construction or permanently during operations).

growth within the Bay Area (ABAG 2021a, page 122). The historical and projected households for the superdistricts within proximity of the project site, plus Santa Clara County is shown in **Table 4.14-1**. The household projections between 2015 and 2050 show a growth ranging from 60 to 199 percent or 1.7 and 5.7 percent per year in superdistricts throughout a 6-mile radius of the project site.

TABLE 4.14-1 HISTORICAL AND PROJECTED HOUSEHOLDS

Superdistrict	Area	2015	2050	Projected Household Change 2015-2050 Number	Projected Household Change 2015-2050 Percent (%)	Projected Household Change 2015-2050 Percent per Year (%)
East Santa Clara County	Milpitas (partial), San José (partial)	108,000	180,000	72,000	67%	1.9%
North Santa Clara County	Sunnyvale, Santa Clara (partial), Mountain View (partial), Milpitas (partial), San José (partial), Palo Alto (partial)	107,000	320,000	212,000	199%	5.7%
Central Santa Clara County	Campbell (partial), San José (partial)	105,000	168,000	63,000	60%	1.7%
Santa Clara County		623,000	1,075,000	453,000	73%	2.1%

Source: ABAG 2021b.

Housing

Table 4.14-2 presents housing supply data for the project area. Year 2022 housing estimates indicated 33,053 vacant housing units within Santa Clara County, representing a vacancy rate of 5.0 percent (CA DOF 2022).

TABLE 4.14-2 HOUSING SUPPLY ESTIMATES IN THE PROJECT AREA

Housing Supply	2022 Total	2022 Vacant	2022 Vacant Percent
Fremont	78,107	3,175	4.1
Milpitas	25,349	837	3.3
San José	342,902	13,918	4.1
Santa Clara	51,252	3,557	6.9
Sunnyvale	61,722	3,137	5.1
Santa Clara County	664,469	33,053	5.0

Source: CA DOF 2022.

San José's General Plan provides for the long-term ability to construct up to 120,000 new dwelling units and the development of up to 382,000 new jobs through 2040. Combined with San José's current development and this additional growth capacity, San José could grow to 751,000 jobs and 430,000 dwelling units, supporting a residential population of 1.3 million people with a Jobs/Employed Resident Ratio of 1.1/1 (San José 2022). The Santa Clara County regional housing needs assessment allocation projects a county need of 129,577 new housing units by 2031. Of the 129,577 new housing units, 62,200 new housing units would be needed in the City of San José (ABAG 2021c, page 28).

Labor Supply

Table 4.14-3 presents the California Employment Development Department 2018-2028 Occupational Employment Projections for the project's construction occupations in the San Jose-Sunnyvale-Santa Clara MSA. The projections are estimates of the expected demand for individual occupations.

TABLE 4.14-3 PROJECTED EMPLOYMENT GROWTH

San Jose-Sunnyvale-Santa Clara MSA	Year 2018	Year 2028	Percent Change
Construction and Extraction Occupations	44,210	47,700	7.9
General and Operation Managers	16,920	18,260	7.9
Security Guards	9,910	10,420	5.1
Janitor and Cleaners, Except Maids and Housekeeping Cleaner	18,180	19,710	8.4
Assemblers and Fabricators	19,190	17,630	-7.9
Metal Workers and Plastic Workers	11,130	10,620	-4.6

Note: Long-term (10 year) projections are based on annual average employment levels by industry for the base (2018) and target (2028) years. Source: CA EDD 2022.

Regulatory Background

No regulations related to population and housing apply to the project.

4.14.2 Environmental Impacts

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

Construction

Less Than Significant Impact. The project would not directly or indirectly induce substantial unplanned growth in the City of San José. The project does not propose new housing and the site is designated TEC - Transit Employment Center. While the project includes 38 diesel generators, the electricity produced would directly serve the data

center buildings if power interruptions occurred and would not be an extension of infrastructure that could result in indirect population growth.

Construction activities would take place in two phases. Phase I would include demolition of the existing building and infrastructure that cannot be reused, grading of the site, installation of utility services including interim power, and construction of the substation and associated Pacific Gas and Electric Company distribution upgrades. Construction of the advanced manufacturing building, Data Center Building SVY05, and parking structure would take place in Phase I. Phase I is estimated to take 16 to 19 months to complete. The construction workforce for Phase I is estimated to average 100 workers per month and a peak workforce of 150 workers per month (DayZenLLC 2021a). Construction of Phase II would include the construction of Building SVY06. Phase II construction would take approximately 16 months to complete. Phase II construction workforce would require an average of 80 workers per month and a peak workforce of 200 workers per month. (DayZenLLC 2021a)

The applicant anticipates all the construction workforce for the project would be provided by the local union halls within the Bay Area (DayZenLLC 2022f). As shown in the "Setting" subsection of this analysis, there is a sufficient local construction workforce in the San Jose-Sunnyvale-Santa Clara MSA to accommodate the project; thus, the construction workforce would not likely seek temporary lodging closer to the project site. Furthermore, based on staff's experience, construction workers tend not to seek lodging closer to the project site when they live within two hours of the project site. Therefore, the project's construction workforce would not directly or indirectly induce substantial population growth in the project area. The impact would be less than significant.

Operation

Less Than Significant Impact. The project would employ approximately 339 operations workers. There would be approximately 269 employees for the advanced manufacturing building and 70 employees for the SVY Data Center (DayZenLLC 2022n). The data center would operate with 3 shifts per day 7 days a week and each shift would have a minimum of 2 technicians and 7 operations technicians. The applicant anticipates all the operations workforce would be recruited from the Bay Area, closer to or within the City of San José and South Bay Area (DayZenLLC 2021a). Based on the proximity of the supply of operations workers, they are not likely to relocate closer to the project. If some operations workers were to relocate, housing data shows a vacancy rate of 5.0 percent in Santa Clara County and 4.1 percent in the City of San José. A 5-percent vacancy is a largely industry-accepted minimum benchmark for a sufficient amount of housing available for occupancy (Virginia Tech 2006). While the vacancy rate in the city is slightly lower than the minimum benchmark, housing counts in the project area indicate a sufficient supply of available housing units for the possible few operations workers that could seek housing closer to the project. In addition, the city's general plan has accounted for population growth in the City of San José (San José 2022, Chapter 1). If the few new operation workers were to relocate closer to the project site, it would not result in unplanned

population growth. Therefore, the project's operations workforce would not directly or indirectly induce a substantial population growth in the project area. The impact would be less than significant.

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Construction

No Impact. The project site is currently developed with two office buildings. There are no residences located on the project site. Therefore, the project would not displace any people or housing and construction of replacement housing elsewhere would not be necessary. No impact would occur.

Operation

Less Than Significant Impact. The project's 339 operation workers would be drawn from the Bay Area, primarily within or close to the City of San José and the South Bay. If some operation workers were to move closer to the project, there is a sufficient housing supply for these operation workers and their existing housing within the Bay Area would be vacated. Therefore, the project would not displace a substantial number of people or housing, and no replacement housing would need to be constructed elsewhere. The impact would be less than significant.

4.14.3 Mitigation Measures

None required.

4.14.4 References

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4.15 Public Services

This section describes the environmental setting and regulatory background and discusses impacts associated with the construction and operation of the project with respect to public services.

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

Environmental checklist established by CEQA Guidelines, Appendix G.

4.15.1 Environmental Setting

The project would be in the City of San José in Santa Clara County. The project would include two three-story data center buildings with approximately 220,012 and 302,182 square feet (sq. ft.), one advanced manufacturing building (AMB) with approximately 136,573 sq. ft., two generators equipment yards, a parking garage, landscaping, and associated pipeline for water and wastewater. The project would also include a utility substation to be owned and operated by Pacific Gas and Electric Company (PG&E) (DayZenLLC 2021a, Section 3.0 Project Description and DayZenLLC 2022f, DR response #34). Fire and police protection services are provided to the project site from departments within the City of San José. Recreation facilities and other public facilities like libraries are also provided by the City of Santa José. Therefore, the study area for public services-related impacts is the City of San José, except for schools because the project site is within the Orchard Elementary and East Side Union High school district boundaries.

Fire Protection

The project would be located within the jurisdiction of the San José Fire Department (SJFD). The SJFD provides fire suppression, emergency medical services, and fire

preventions services to the City of San José (San José 2021, page 76). The SJFD has 33 fire station stations. Station 23 is located at 1771 Via Cinco de Mayo, approximately 0.9 mile east of the project site. (SJFD 2020a)

The SJFD has approximately 676 fire service personnel (SJFD 2022). In 2020-2021, SJFD responded to approximately 94,800 incidents. Of the incidents SJFD responded to, approximately 60 percent were for medical emergencies, 5 percent for fires, and 34 percent were for other incidents (rescues, good intent calls, and false alarms) (San José 2021).

The SJFD's goal is to respond within 8 minutes for 80 percent of Priority 1 incidents and within 13 minutes for 80 percent of Priority 2 incidents. In 2020-2021, SJFD responded to 73 percent of Priority 1 incidents within 8 minutes and 93 percent of Priority 2 incidents within 13 minutes. The SJFD disaggregates Priority 1 response time by three time targets: dispatch time, turnout time, and travel time. SJFD met its target for dispatch time and turnout time. The SJPD met its travel time standard for 44 percent of Priority I incidents. (San José 2021) San José is not in a very high fire hazard severity zone in a local responsibility area (Cal Fire 2008).

Police Protection

Police protection would be provided by the San José Police Department (SJPD). The SJPD is located at 201 West Mission Street, approximately 3.8 miles south the project site. The SJPD has 113 sworn authorized positions per 100,000 residents (San José 2021). The SJPD is comprised of four bureaus and the Bureau of Field Operations (BFO) is the primary provider of police services for the residents of San José. The BFO has over 980 officers and responds to emergency and non-emergency calls for service. The BFO is divided into four divisions and the project site is in the Central Division (SJPD 2022).

In 2020-2021, the SJPD handled 1.2 million calls for service and responded to 188,600 Priority 1 to 4 incidents. Approximately 5 percent of the incidents SJPD responded to were Priority 1 and approximately 46 percent were Priority 2. The City of San José's *Envision 2040 General Plan* (general plan) identifies a goal to provide a response time of 6 minutes or less for 60 percent of all Priority 1 calls and 11 minutes or less for 60 percent of all Priority 2 calls (San José 2022 Chapter 4 page 38). The average response time for Priority 1 calls was 7.12 minutes and the average response time for Priority 2 calls was 22.8 minutes (San José 2021).

Schools

The project would be located within the Orchard Elementary School District and East Side Union High School District. Orchard Elementary has enrollment of 765 students in the 2021/2022 school year (CDE 2022a). The school district consists of one school and enrolls students from kindergarten to eighth grade. In the Orchard Elementary School District, the school is approximately 1 mile south of the project site. The East Side Union High School District had an enrollment of 25,174 students in the 2021/2022 school year (CDE

2022b). East Side Union School District facilities include: 11 high schools, 5 alternative education schools, 12 charter schools, and an adult education program (ESUHSD 2022). Piedmont High School is approximately 2.3 miles east of the project site. The project site is adjacent to the Milpitas Unified School District boundary and the nearest school to the project site Mabel Mattos Elementary School, located approximately 0.3 mile north of the project site.

Parks

The City of San José has 199 neighborhood and 10 regional parks, 40 trail systems, and 47 community centers (San José 2021). Included in the park and recreation areas are ball fields, basketball hoops, park playgrounds, swimming pools, skate parks, dog parks, courts (bocce ball, volleyball, and tennis), and a zoo (San José 2017).

The City of San José's goal is to provide 3.5 acres of neighborhood/community serving parkland per 1,000 population through a combination of 1.5 acres of public park and 2 acres of recreational school grounds open to the public. San José also has the goal to provide 7.5 acres of citywide/regional park and open space lands per 1,000 population and 500 square feet of community center space per 1,000 population (San José 2018).

The 2020 population for the City of San José is 1,013,240 people (U.S. Census 2020). With a total 1,232 acres of neighborhood parks, San José has approximately 1.2 acres per 1,000 population and does not meet its park standard for neighborhood/community serving parkland. With a combined total of 1,984 acres of regional parks and open space and undeveloped land, San José has approximately 2.0 acres per 1,000 population and does not meet its citywide/regional park and open space standard. San José has 547,704 square feet of community center facilities and meets its community center facilities standard with 538 square feet per 1,000 population (San José 2021).

San José's closest park to the project site is the Brooktree Park, which is located 0.9 mile to the southeast. The 7.7-acre park has playgrounds and a BBQ area. The City of San José maintains this park (San José 2020). The Pinewood Park in the City of Milpitas is the closest park to the project site, located approximately 0.8 mile northwest the project site. The eight-acre Pinewood Park provides tennis courts, a tot lot, and barbeque units and tables (Milpitas 2016).

Other Public Facilities

The San José City Library has 25 branches to serve the City of San José. The City's closest library to the project site is the Berryessa Branch Library, which is located approximately 3 miles to the east (SJPL 2022). The Milpitas Library in the City of Milpitas is the closest library to the project site, which is located approximately 2.1 miles north of the project site.

Regulatory Background

No regulations related to public services apply to the project.

4.15.2 Environmental Impacts

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

i. Fire protection?

Construction

Less Than Significant Impact. The project site, consisting of two properties, is developed with two existing office buildings that are already served by fire protection and emergency services.

Project construction activities that could pose a risk for fire or the need for fire protection response due to heated exhaust or sparks, include the use of cranes, excavation equipment, and vehicles. Other construction activities with a potential fire risk due to heat sources or open flames could include the use of torches or welding.

The standard for fire protection response time for Priority 1 incidents is eight minutes, 80 percent of the time. Current data show the SJFD meets it target response time for dispatch and turnout time. SJFD met its target travel time 44 percent of Priority 1 incidents. (San José 2021). While there may be a slight increased need for fire protection response during project construction, these effects would be temporary and would not be sufficient to induce the construction of new or physically altered governmental facilities that could result in significant environmental impacts. Therefore, impacts would be less than significant.

Operation

Less Than Significant Impact. The project would employ an estimated 339 operations workers; 269 workers for the AMB and 70 for the data center (DayZenLLC 2022n). The applicant estimates that all the workers would be hired locally from the Bay Area, primarily within or close to the City of San José or South Bay Area (DayZenLLC 2022f). Based on the proximity of the available workforce within commuting distance of the project site and staff's experience, the operations workers are not likely to relocate closer to the project. The few operations employees that may move into San José and within SJFD's service area would have a negligible effect on the ability of the existing fire stations to meet their emergency service and response standards.

Operation of the project would include the use and storage of diesel fuel to run the emergency backup generators. The generators would be in a stacked formation with a

diesel fuel tank at the base of the stacking structure and a smaller fuel tank within the upper generator package (DayZenLLC 2021a, page 11). The fuel tanks would be double walled with leak detection. Diesel fuel deliveries would occur as needed in a compartmentalized tanker truck with a maximum capacity of 8,500 gallons. An emergency pump shut-off would be used if a pump hose breaks while fueling the tanks (DayZenLLC 2021a, page 20, 165-166). Emergency access to the site would be provided from driveways on Fortune Drive, Ringwood Drive, and Trade Zone Boulevard (DayZenLLC 2022d).

The project would conform with applicable building and fire codes. The SJFD would review project plans to ensure appropriate safety features are incorporated to reduce fire hazards (DayZenLLC 2021a, page 199). With all the above elements being satisfied, no new or physically altered fire facilities would be required for project operation and the impacts to the fire protection service would be less than significant.

ii. Police Protection?

Construction

Less Than Significant Impact. The construction workforce would be drawn from the Bay Area and is not expected to relocate closer to the project site. Therefore, they would not increase the demand for emergency response services, including police protection.

Construction of the project may result in a slight increase in the need for police services. However, the project site is currently served by the SJPD and the average response times for the police department would not be significantly affected by the project construction. Any increase in the need for police services from project construction would be temporary and would not require the need for construction of new or physically altered governmental facilities, such as police stations. Therefore, impacts would be less than significant.

Operation

Less Than Significant Impact. The project's 339 operations workers would be drawn from the Bay Area and are likely to reside within commuting distance of the project site and would not need to relocate closer to the project site. This conclusion is based on staff research on employee behavior and the robust labor market in the Bay Area. The few operations employees that may move into San José and within SJPD's service area would have a negligible effect on the ability of the SJPD to meet its emergency service and response standards.

The project site, consisting of two properties, is developed with two existing office buildings that are already served by the SJPD. To enhance security and reduce the need for police response, the project would include outdoor security lighting along the data center buildings and driveway entrances and the substation would be secured by fencing (DayZenLLC 2021a, page 34, 69).

The project would not result in substantial adverse physical environmental impacts associated with the provision of new or physically altered police service facilities in order to maintain acceptable service ratios, response times, or other performance objectives. Impacts would be less than significant.

iii. Schools?

Construction and Operation

Less Than Significant Impact. The project would be in the East Side Union High School District and Orchard Elementary School District. District Board Policy (BP 7211 Facilities: Developer Fees) allows the Board of Trustees to establish, levy, and collect developer fees on residential, commercial, and industrial construction within the district. Government Code section 65995 expressly provides that "[t]he payment or satisfaction of a fee, charge, or other requirement levied or imposed pursuant to Section 17620 of the Education Code in the amount specified in Section 65995… are hereby deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving but not limited to, the planning, use, or development of real property, or any change in governmental organization… on the provision of adequate school facilities." The current school impact fee for East Side High district is $0.22 per square foot of covered, enclosed commercial/industrial space (ESUHSD 2020). Based on the proposed size of the two data center buildings and AMB (combined total of 522,194 sq. ft.), an estimated $114,883 would be assessed. The current school impact fee for Orchard Elementary is $0.36 per square foot of covered, enclosed commercial/industrial space and an estimated $187,990 would be assessed (CEC 2022e). These fees would be collected at the time the applicant applies for building permits from the City of San José; therefore, impacts would be less than significant.

iv. Parks?

Construction

No Impact. Construction of the project would require an average 100 workers per month in Phase I and 80 workers per month in Phase II. The peak workforce would be 150 workers in Phase I and 200 workers in Phase II. The construction workforce would be drawn from the Bay Area and would not require an influx of new workers. Based on staff research regarding construction employee behavior and the robust labor market in the Bay Area, including San José, even if some construction workers were to temporarily relocate closer to the project site, they are not likely to increase levels of residential park use. Workers that temporarily relocate would likely return to their primary residence for the weekends. The construction workers are not likely to, but may visit park facilities before, during, or after a workday, but this would be a short-term use, if any, that would cease at the end of the project's construction. Therefore, construction of the project would not affect park standards or increase the demand for park facilities. The project construction would have no impact on parks, trails, or park facilities.

Operation

Less Than Significant Impact. The approximately 339 operations workers would be drawn from the Bay Area, largely from within or close to the City of San José and the South Bay Area and are likely to reside within commuting distance of the project site and not likely to relocate closer to the project. Even if some operations workers were to relocate, the few new residents would have a negligible increase on the usage of or demand for parks, trails, or other recreational facilities. The project would not result in substantial adverse physical environmental impacts associated with the provision of new or physically altered park facilities in order to maintain acceptable service ratios or other performance objectives. Impacts would be less than significant.

v. Other Public Facilities?

Construction

No Impact. The construction workforce would be drawn from the Bay Area. Staff research shows workers are likely to reside within commuting distance of the project site and would not likely relocate closer to the project site. However, if some construction workers were to temporarily relocate, they are not likely to visit public facilities such as public libraries as they are working while in the project area and tend to return to their primary residence for the weekends. There would be no impacts to public facilities during project construction.

Operation

Less Than Significant Impact. The project's anticipated 339 operations employees would be drawn from the Bay Area, largely from within or close to the City of San José and the South Bay Area. Staff research has shown workers are likely to reside within commuting distance of the project site and are not expected to relocate closer to the project site. However, if some operations workers were to relocate, the few new residents would likely have a negligible increase in the usage of or demand for the surrounding libraries or public facilities; therefore, the project's operations impacts would be less than significant.

4.15.3 Mitigation Measures

None required.

4.15.4 References

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4.16 Recreation

This section describes the environmental setting and regulatory background and discusses impacts associated with the construction and operation of the project with respect to recreation.

RECREATION	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

Environmental checklist established by CEQA Guidelines, Appendix G.

4.16.1 Environmental Setting

The project is proposed in the City of San José in Santa Clara County. The project site is developed on property designated as TEC - Transit Employment Center. The City of Milpitas is located north of the project site. Given the proximity of the Milpitas border to the project site, staff considers the cities of San José and Milpitas as the project study area for recreation impacts.

Recreation Facilities

The City of San José has 199 neighborhood and 10 regional parks, 40 trail systems, and 48 community centers (San José 2021). San José's closest park to the project site is Brooktree Park, which is located 0.9 mile to the southeast. The City of San José maintains this park.

The City of Milpitas has 33 parks, several miles of trails, five community service buildings, and a sports complex (Milpitas 2022). Pinewood Park in the City of Milpitas is the closest park to the project site, located approximately 0.8 mile northwest of the project site.

Regulatory Background

No regulations related to recreation apply to the project.

4.16.2 Environmental Impacts

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Construction

No Impact. Construction of the project would take place in two phases. Phase I would require an average 100 workers and a peak of 150 workers per month for Phase 1. Construction of Phase II would require an average of 80 workers and a peak of 200 workers per month. Total construction is expected to last for 32 to 35 months (DayZenLLC 2021a). The applicant estimates that all of the construction workforce would be recruited from the Bay Area, thus the workforce would likely be drawn from the San Jose-Sunnyvale-Santa Clara region.[1] Based on the proximity of the available workforce to the project and staff's experience, construction workers from neighboring cities and counties are not likely to temporarily relocate closer to the project site or visit the nearby parks. The project would not increase the use of or accelerate the physical deterioration of parks or other recreational facilities. Therefore, the project would have no impact on the surrounding parks and recreational facilities.

Operation

Less Than Significant Impact. The project would employ 339 operations workers drawn from the Bay Area (see **Section 4.14 Population and Housing**). Based on the proximity of the supply of operations workers, they are not likely to relocate closer to the project. If, however, some operation workers were to move closer to the project, they would not be in numbers where the use of existing parks or recreational facilities would be increased to the extent that substantial physical deterioration of the park or facility would result. Impacts to surrounding parks and recreational facilities would be less than significant.

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

Construction

No Impact. Recreational facilities are not included as part of the project, nor would the project require the construction or expansion of recreational facilities. The demolition and construction of the project would not require an influx of new workers and would be supplied by the existing workforce from the surrounding Bay Area, including nearby cities and counties. Based on staff's experience and the robust labor market in the Bay Area,

1 Region in this instance is the Metropolitan Statistical Area. A Metropolitan Statistical Area is a geographical region with a relatively high population density at its core and close economic ties throughout the area.

workers tend to commute to the project site during construction, and are not likely to temporarily locate closer to the project. Also, construction workers do not typically visit recreation sites near the project. Therefore, project construction would have no impacts to recreational facilities.

Operation

Less Than Significant Impact. Operation of the project would be conducted by 339 operations workers (70 employees for the data center and 269 for the advanced manufacturing building). If some operation workers did move closer to the project, they would not be in the numbers that would require the construction or expansion of recreational facilities. Therefore, operation of the project would have a less than significant impact on recreational facilities and not require the construction or expansion of recreational facilities to accommodate the project.

4.16.3 Mitigation Measures

None required.

4.16.4 References

DayZenLLC 2021a – DayZenLLC (DayZenLLC). (TN 240910). STACK Backup Generating Facility Application for SPPE, dated December 10, 2021. Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-SPPE-02

DayZenLLC 2022f – DayZenLLC (DayZenLLC). (TN 243473). STACK TZP Responses to CEC Data Request Set 1, dated June 7, 2022. Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-SPPE-02

Milpitas 2022 – City of Milpitas (Milpitas). City of Milpitas Parks & Recreation Master Plan. Accessed on: May 2022 Available online at: http://www.ci.milpitas.ca.gov/_pdfs/rec_parksMasterPlan.pdf

San José 2021 – City of San José (San José). City of San José Annual Report on City Services 2020-2021. December 2021. Accessed on: April 2022. Available online at: https://www.sanjoseca.gov/home/showpublisheddocument/80634/637800044609900000

4.17 Transportation

This section describes the environmental setting and regulatory background of the project with respect to transportation and discusses transportation impacts associated with construction and operation of the project.

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

Environmental checklist established by CEQA Guidelines, Appendix G

4.17.1 Environmental Setting

The project site is located in the City of San José on a 9.8-acre developed lot. The site is associated with two addresses: 2400 Ringwood Avenue and 1849 Fortune Drive. The 2400 Ringwood Avenue portion of the site is developed with an 80,000 square foot building (Olympus Building) and the 1849 Fortune Drive address is developed with a 55,000 square foot building (Fortune Drive Building). Both buildings would be demolished and cleared for construction of the project.

Numerous urban roadways and freeways, including Interstate 880 (I-880), Interstate 680 (I-680) and State Route 237 (SR 237) would provide regional access to the project site. Other major roadways near the project include Montague Expressway and Lundy Avenue. Direct access is provided by Fortune Drive, Ringwood Avenue, and Trade Zone Boulevard. Access to the site would be provided by existing driveways on Fortune Avenue, Ringwood Avenue, and Trade Zone Boulevard. A new driveway along Trade Zone Boulevard would be constructed as part of the project to serve as the primary entrance for vehicles accessing the proposed parking garage. The Fortune Drive and Ringwood Avenue driveways would enable larger vehicles, such as garbage trucks, emergency vehicles and delivery trucks, to access the site. A fire loop drive aisle would be located around the perimeter of the data center buildings and would connect all entrances.

Nearby transportation infrastructure includes sidewalks, bike lanes, bus transit, passenger rail, and the Norman Y. Mineta San José International Airport. Pedestrian connectivity is provided by a network of sidewalks and crosswalks that serve the surrounding area.

Sidewalks are present along Fortune Drive, Ringwood Avenue, and Trade Zone Boulevard. Class II bike lanes are located on project frontages along Trade Zone Boulevard and Ringwood Avenue (VTA 2020). A Class II bike lane is also located along Capitol Avenue which provides direct access to the Milpitas Bay Area Rapid Transit (BART) Station. Off-street bicycle trails are located to the west of the project site along the Coyote Creek and Penitencia Creek that provide access to central San José and Santa Clara.

The closest bus stop is located adjacent to the project site along Trade Zone Boulevard and is served by Santa Clara Valley Transportation Authority (VTA) frequent Bus Routes 60 and 77. Both bus routes provide access to the Milpitas BART Station located 1.4 miles north of the site. The nearest Amtrack stop is located 4 miles west of the project site at the Great America Station (VTA 2022). The Great America Station also provides connections to the Alamont Corridor Express (ACE) which provides commuter rail service from Stockton to San José. The Norman Y. Mineta San José International Airport is located approximately 2.8 miles southwest of the project site and has two runways that exceed 3,200 feet in length (AirNav 2022).

Regulatory Background

Federal

Code of Federal Regulations (Title 14, Part 77.9 [b][1]). This regulation requires Federal Aviation Administration (FAA) notification for construction or alterations within 20,000 feet of an airport with a runway more than 3,200 feet in length if the height of the construction or alteration exceeds a slope of 100 to 1 extending outward and upward from the nearest point of the nearest runway of the airport (CFR 2020a). The threshold for the FAA notification 100 to 1 surface exceedance height is approximately 158 feet above ground level (AGL) at the project site. If a project's height, including any temporary equipment (such as cranes used during construction) or any ancillary structures (such as transmission poles), exceeds the 100 to 1 surface, the project applicant must submit a copy of FAA Form 7460-1, Notice of Proposed Construction or Alteration, to the FAA.

State

California Department of Transportation. Project construction activities that require movement of oversized or excessive load vehicles on state roadways require a transportation permit issued by the California Department of Transportation (Caltrans). Caltrans may also require the applicant to prepare a Transportation Management Plan prior to construction to reduce effects on the state transportation network (Caltrans 2019).

Local

Santa Clara County Airport Land Use Commission's Comprehensive Land Use Plan for Norman Y. Mineta San José International Airport. Figure 6 of the Santa Clara County Airport Land Use Commission's Comprehensive Land Use Plan (CLUP) identifies the Federal Aviation Regulations (FAR) Part 77 surfaces surrounding the airport.

FAR Part 77 surfaces are those identified by the FAA as obstruction surfaces around an airport. Exceedance of these surfaces could result in obstruction of airspace and hazards to aircraft entering or exiting the San José International Airport. At the project site, the FAR Part 77 surface shown on Figure 6 of the CLUP is at 412 feet above mean sea level (AMSL) (Santa Clara County 2016).

City of San José *Envision San José 2040 General Plan*. The *Envision San José 2040 General Plan* includes policies for the purpose of avoiding or mitigating impacts resulting from planned development projects with the City. The following policies are specific to transportation and are applicable to the proposed project.

- Policy TR-1.1: Accommodate and encourage use of non-automobile transportation modes to achieve San José's mobility goals and reduce vehicle trip generation and vehicle miles traveled (VMT).
- Policy TR-1.2: Consider impacts on overall mobility and all travel modes when evaluating transportation impacts of new developments or infrastructure projects.
- Policy TR-1.4: Through the entitlement process for new development, fund needed transportation improvements for all transportation modes, giving first consideration to improvement of bicycling, walking and transit facilities. Encourage investments that reduce vehicle travel demand.
- Policy TR-1.6: Require that public street improvements provide safe access for motorists and pedestrians along development frontages per current City design standards.
- Policy TR-1.7: Require that private streets be designed, constructed and maintained to provide safe, comfortable, and attractive access and travel for motorists and for pedestrians, bicyclists, and transit users of all ages, abilities, and preferences.
- Policy TR-1.8: Actively coordinate with regional transportation, land use planning, and transit agencies to develop a transportation network with complementary land uses that encourage travel by bicycling, walking and transit, and ensure that regional greenhouse gas emissions standards are met.
- Policy TR-2.1: Coordinate the planning and implementation of citywide bicycle and pedestrian facilities and supporting infrastructure. Give priority to bicycle and pedestrian safety and access improvements at street crossings and near areas with higher pedestrian concentrations (school, transit, shopping, hospital, and mixed-use areas).
- Policy TR-2.2: Provide a continuous pedestrian and bicycle system to enhance connectivity throughout the City by completing missing segments. Eliminate or minimize physical obstacles and barriers that impede pedestrian and bicycle movement on City streets. Include consideration of grade separated crossings at railroad tracks and freeways. Provide safe bicycle and pedestrian connections to all facilities regularly accessed by the public, including the Mineta San José International Airport.

- Policy TR-2.8 Require new development where feasible to provide on-site facilities such as bicycle storage and showers, provide connections to existing and planned facilities, dedicate land to expand existing facilities or provide new facilities such as sidewalks and/or bicycle lanes/paths, or share in the cost of improvements.
- Policy TR-2.18: Provide bicycle storage facilities as identified in the San José Bicycle Master Plan.
- Policy TR-3.3: As part of the development review process, require that new development along existing and planned transit facilities consist of land use and development types and intensities that contribute towards transit ridership. In addition, require that new development is designed to accommodate and to provide direct access to transit facilities.
- Policy TR-4.1: Support the development of amenities and land use and development types and intensities that increase daily ridership on the VTA, BART, Caltrain, ACE and Amtrak California systems and provide positive fiscal, economic, and environmental benefits to the community.
- Policy TR-5.5: Require that new development, which includes new public or private streets, connect these streets with the existing public street network and prohibit the gating of private streets with the intention of restricting public access. Furthermore, where possible, require that the street network within a given project consists of integrated short blocks to facilitate bicycle and pedestrian travel and access.
- Policy TR-8.4: Discourage, as part of the entitlement process, the provision of parking spaces significantly above the number of spaces required by code for a given use.
- Policy TR-9.1: Enhance, expand, and maintain facilities for walking and bicycling, particularly to connect with and ensure access to transit and to provide a safe and complete alternative transportation network that facilitates non-automobile trips.

City of San José, Transportation Analysis Policy 5-1. The City of San José adopted Transportation Analysis Policy 5-1 to align with Senate Bill 743. This policy replaces Transportation Impact Policy 5-3 and establishes thresholds for transportation impacts under the California Environmental Quality Act (CEQA) based on VMT instead of level of service (LOS). The intent of this change is to shift the focus of transportation analysis under CEQA from vehicle delay and roadway auto capacity to a reduction in vehicle emissions.

According to the policy, an employment (e.g., office or research and development) project's transportation impact would be less than significant if the project VMT is 15 percent or more below the existing regional VMT per employee. For industrial projects (e.g., warehouse, manufacturing, distribution), the impact would be less than significant if the project VMT is equal to or less than existing average regional per capita VMT. Screening criteria have been established by the city to determine which projects require a detailed VMT analysis. If a project meets the relevant screening criteria, it is considered to a have a less than significant VMT impact. If a project's VMT does not meet the

screening criteria and established thresholds, VMT reduction measures would be required, where feasible. VMT reduction measures consist of: (1) project characteristics, (2) multimodal network improvements, (3) parking, and (4) transportation demand management (TDM) measures. TDM measures are programmatic measures that aim to reduce VMT by decreasing personal motorized vehicle use and by encouraging more walking, biking, and riding transit. TDM measures are enforced through annual trip monitoring to assess the project's status in meeting the VMT reduction goals.

In addition to a VMT analysis, Policy 5-1 also requires certain projects prepare a Local Transportation Analysis (LTA) to address the effects of a project on transportation, access, circulation, and related safety elements as it relates to the operation of the project. LTAs provide additional information to evaluate transportation conditions proximate to a project and supplements the VMT analysis.

City of San José, Transportation Analysis Handbook 2020. The Transportation Analysis Handbook provides transportation analysis (TA) significance criteria, screening criteria, and thresholds of significance for environmental clearance of development projects, city transportation projects, and General Plan amendments. In addition, it provides a framework for a TA based on the city's transportation policies and the *Envision San José 2040 General Plan*. It also provides appropriate methodologies, procedures, and process for the preparation of a TA report within the context of CEQA. Lastly, it provides the appropriate methodologies, procedures, and process for determining the effects of projects on the local transportation system.

A TA that includes an analysis of VMT and local transportation impacts related to LOS was conducted for the project. Existing peak hour traffic volumes for nine intersections (eight signalized intersections and one unsignalized intersection) within the project's immediate vicinity were obtained from the City of San José. The results of the LOS analysis, contained in Appendix E of the TA, confirm two signalized study intersections (Oakland Road/Main Street and Montague Expressway and Trade Zone Boulevard/McCandless Drive and Montague Expressway) are currently operating at unacceptable levels of service (LOS "F") during peak hours of traffic and would continue to operate unacceptably under background and background plus project conditions (DayZenLLC 2022w). Discussion of LOS impacts are included for informational purposes as the required CEQA analysis centers on VMT.

4.17.2 Environmental Impacts

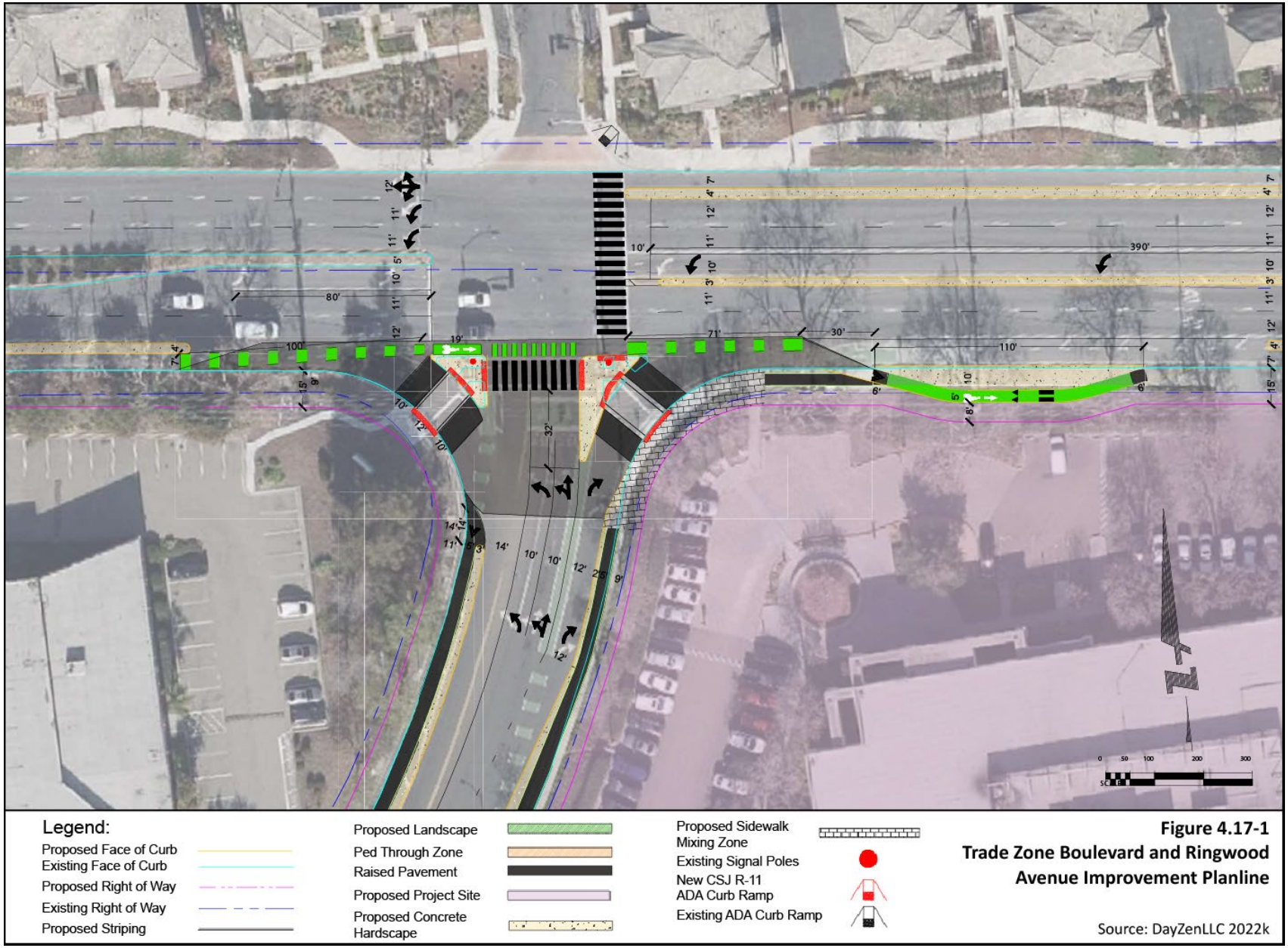
a. Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Construction

Less Than Significant Impact. Project construction would not significantly obstruct any transit, roadway, bicycle, or pedestrian facilities in the area. Construction activities would occur mostly onsite and not in the public right-of-way, with the exceptions of the new driveway located on Trade Zone Boulevard, connections to domestic water, reclaimed water, fire water, sanitary sewer, fiber optic cables, and storm drain that would be made along Trade Zone Boulevard, Ringwood Avenue, and Fortune Drive. Required transmission line interconnections would be made adjacent to the site at the intersection of Trade Zone Boulevard and Montague Expressway. In addition, to mitigate VMT impacts (see criterion "b", below), the project owner would make multimodal improvements that include removing the pork-chop islands or providing raised crosswalks at the southwest and southeast corners of the Ringwood Avenue and Trade Zone Boulevard intersection, providing protected Class IV bike lanes along both sides of Trade Zone Boulevard (bike lanes will be physically separated from vehicle travel lanes), and constructing a raised median with limited breaks along the project frontage at Trade Zone Boulevard (**TRANS-1**). Furthermore, the project owner would be required to provide a monetary contribution for an in-lieu fee of $121 per linear foot to construct the Class IV 7-foot-wide protected bike lanes along the project frontages on Trade Zone Boulevard and Ringwood Avenue per the City of San José Better Bike Plan 2025 and Trade Zone Boulevard and Ringwood Avenue improvement plan shown in **Figure 4.17-1**. Thus, the project would contribute to the fulfillment of pedestrian and planned bicycle facilities.

Based on the city's bicycle parking requirements the project applicant is required to provide a total of 34 bicycle parking spaces. The project site plan shows a total of 38 proposed bicycle parking spaces, consisting of 11 long-term spaces within the parking garage and 27 short-term spaces at the building entrance along Ringwood Avenue. Therefore, the proposed bicycle parking spaces would exceed the city's bicycle parking requirements and encourage the use of alternative modes of travel.

The City of San José, as the permitting agency, would ensure the project applicant obtains the proper permits for these activities to minimize disruption to the circulation system. Furthermore, the City of San José would require the project owner to submit a construction management plan for city review and approval that includes a remediation procedure, construction schedule, construction staging and parking areas, as well as planned street closures, detours, and planned truck routes. Lastly, the City of San José, as the permitting agency, would require the project owner to obtain all the required permits from Caltrans for any encroachment of state roadways and for the movement of oversized or excessive load vehicles on state roadways, and to submit to Caltrans a


Legend:
Proposed Face of Curb
Existing Face of Curb
Proposed Right of Way
Existing Right of Way
Proposed Striping
Proposed Landscape
Ped Through Zone
Raised Pavement
Proposed Project Site
Proposed Concrete Hardscape
Proposed Sidewalk Mixing Zone
Existing Signal Poles
New CSJ R-11 ADA Curb Ramp
Existing ADA Curb Ramp
Figure 4.17-1
Trade Zone Boulevard and Ringwood Avenue Improvement Planline
Source: DayZenLLC 2022k

Transportation Management Plan, if required for the project, prior to construction to reduce effects on the state transportation network.

The project would be consistent with the General Plan circulation policies (discussed under the "Regulatory Background" subsection) which are intended to improve multimodal accessibility between land uses and to facilitate the use of non-vehicular travel. Project construction would not conflict with any program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, and would therefore have less than significant impacts.

Operation

Less Than Significant Impact. Operation of the project would occur fully onsite and would not obstruct pedestrian, bike, or transit facilities. Additionally, the project would not interfere with any future pedestrian, bike, or transit plans for the area. Operation of the project would not conflict with any program, plan, ordinance, or policy addressing the circulation system, and would therefore result in less than significant impacts.

b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Construction

Less Than Significant Impact. CEQA Guidelines section 15064.3, subdivision (b), states that generally VMT is the most appropriate measure of transportation impacts. VMT refers to the amount and distance of automobile travel attributable to a project. Increased VMT exceeding an applicable threshold could constitute a significant impact. If existing models or methods are not available to estimate the VMT for the particular project being considered, a lead agency may analyze the project's VMT qualitatively, evaluating factors such as the availability of transit or proximity to other destinations. For construction traffic, a qualitative analysis of VMT impacts (instead of a more detailed quantitative analysis) is often appropriate (CNRA 2018; see also CEQA Guidelines section 15064.3, subdivision (b)(3)). The CEQA Guidelines also state that projects within 0.5 mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be regarded as having less than significant VMT impacts (CNRA 2018).

The City of San José's Transportation Policy 5-1 establishes thresholds of significance for development projects. Thresholds of significance are applied based on the development type (e.g., employment, industrial, office, residential, mixed-use). Currently there is not a designated threshold or measurement criteria used to calculate VMT construction impacts. The city's Transportation Analysis Handbook advises that to the extent possible, the CEQA document prepared for a project should include information about project construction such as duration, hours of operations, required grading, potential haul routes, traffic control plans, closure or relocation of bus stops, street closures, and construction entrances. Project construction workers are expected to commute locally from the greater Bay Area (DayZenLLC 2022f). The San José-Sunnyvale-Santa Clara

Metropolitan Statistical Area (MSA) that serves Santa Clara and San Bentio counties has a sufficient local construction workforce to accommodate the project, as described in **Section 4.14 Population and Housing**. Thus, the construction workforce for the project would commute locally rather than requiring construction workers from MSAs that are further away (e.g., Sacramento-Roseville-Folsom MSA). The paragraphs below describe the construction activities that are expected to occur during the project's construction timeline.

Project construction would occur in two separate phases. Phase I activities would include demolition of the existing buildings and infrastructure that cannot be reused, site preparation and grading, installation of utility services (including interim power), construction of the substation, manufacture building, data center building SVY05 and the parking garage. Phase I activities would take approximately 19 months to complete and would require a peak construction workforce of 150 workers and an average of 100 workers at the site. Phase II would include the construction of data center building SVY06 and would be completed in approximately 16 months. The construction workforce during Phase II would require a peak workforce of 200 workers with an average of 80 workers. The total construction timeline would be approximately 35 months.

Based on the construction details provided above, the average construction workforce for both phase I and phase II is estimated to be 90 persons per day, with a peak estimated to be 175 persons. Similar to other recent data center projects, to estimate construction worker trips, the daily trip rates for employees at a general light industrial facility were used. The Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition's trip generation rate for general light industrial land uses (land use code 110) is 3.05 daily one-way trips per employee (ITE 2021). Project construction is estimated to generate an average of 275 (i.e., 3.05 daily one-way trips X 90 workers = 275) daily one-way worker commute trips. The peak construction interval is estimated to involve a maximum of 534 (i.e., 3.05 daily one-way trips X 175 workers = 534) daily one-way worker commute trips. Many of the construction worker trips would be expected to occur prior to the morning and evening peak traffic hours in accordance with typical construction schedules. Truck trips associated with the removal and delivery of equipment and materials would occur throughout the day and would be scheduled for off-peak regional traffic hours, whenever possible. Site preparation may require the transport of up to 34,000 cubic yards of imported fill. If the project requires more than 10,000 cubic yards of fill to be hauled to or from the site, the project owner would be required to apply for a haul permit from the City of San José (DayZenLLC 2022m). Based on experience at other sites, it is estimated that the imported fill would be transported to the site with a frequency average of about 25 trucks per day. No off-site staging or laydown areas are proposed, as construction staging would occur on the project site (DayZenLLC 2022f). Typical activities related to the construction of any development could include lane narrowing and/or lane closures, sidewalk and pedestrian crosswalk closures, and bike lane closures. In the event of any type of closure, clear signage (closure and detour signs) would be provided to ensure vehicles, pedestrians, and bicyclists are able to adequately reach their intended destinations safely.

The project would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) because construction-generated traffic for this site is presumed to be less than significant under CEQA. The site is located adjacent to, and therefore within one half mile of, a major transit stop. Specifically, VTA's frequent bus routes 60 and 77 both provide bus service during commute hours and have connections with the Milpitas BART Station located 1.4 miles north of the site. Also, the San José-Sunnyvale-Santa Clara MSA serving Santa Clara county has a sufficient construction workforce to staff the project thus the construction workforce would commute locally rather than using workers from MSAs that are further away. Lastly, since the local jurisdiction has not adopted thresholds of significant for temporary construction related VMT, and staff's qualitative analysis did not identify a significant level of VMT during the construction phases, the VMT impacts from project construction would be less than significant.

Operation

Less Than Significant with Mitigation Incorporated. Operation trips would be generated by the 339 daily employees (269 for the advanced manufacture building and 70 for the data center building), who would travel to and from the project site; and delivery and trash-hauling trucks (DayZenLLC 2022n). It should be noted that the majority of trips would be made by the 339 employees, and as a result, the vehicle trips generated by the project would be much lower than the number calculated by the Institute of Transportation Engineers (ITE) trip generation rate for data centers (Land Use #160) and for manufacturing (Land Use #140), which estimates an average of 1,166 daily vehicle trips[1].

In accordance with San José's Transportation Analysis Handbook (April 2020, Section 4.8, "Intersection Operations Analysis"), the project is eligible for adjustments and reductions from the baseline (gross) trip generation. The location-based adjustment reflects the project's vehicle mode share based on the "place type" in which the project is located per the San José Travel Demand Model. Based on the VMT Evaluation Tool, the project site is located within a Suburb with Multi-Family Homes place type. Therefore, the baseline project trips were adjusted to reflect the mode share associated with this place type. Industrial developments located within areas designated Suburb with Multi-Family Homes have a vehicle mode share of 92 percent (according to Table 6 of the City's Transportation Analysis Handbook). Thus, an 8 percent reduction was applied to the project trip generation estimates based on the location-based vehicle mode share outputs produced from the San José Travel Demand Model.

Additionally, based on the San José VMT Evaluation Tool, the proposed project is expected to generate 15.07 VMT per employee in an area that currently generates approximately 15.08 VMT per employee. Per City guidelines, every percent reduction in per employee VMT is equivalent to a one percent reduction in peak-hour vehicle trips

1 The VMT Evaluation Tool does not provide for the evaluation of VMT for a Data Center use. Therefore, the proposed project trips were converted to equivalent General Light Industrial space and evaluated as an Industrial land use in the San José VMT Evaluation tool.

(San José 2018). Thus, the project trip estimates were reduced by 0.07 percent for the proposed employment use to reflect the reduction in peak hour trips[2].

Lastly, an existing site trip credit was also applied to vehicle trips generated by the project. Trips associated with the existing 80,000 square foot of office space on the project site were subtracted from the estimated trips to be generated by the proposed project. The AM and PM peak hour trips for the existing office building were obtained from counts (included in Appendix B in the VMT analysis) conducted at the project site's driveways. Daily trips were estimated based on the average trip generation rates for General Office Building (Land Use #710) as published in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition (DayZenLLC 2022w). Based on the driveway counts and ITE's trip generation rates, it is estimated that the existing uses on the project site are generating a total of 867 daily vehicle trips, with 48 trips (40 inbound and 8 outbound) occurring during the AM peak hour and 95 trips (20 inbound and 75 outbound) occurring during the PM peak hour.

After applying the ITE trip rates, appropriate trip reductions, and existing site trip credits, it is estimated that the project would generate an additional 205 daily vehicle trips over existing conditions, with 90 trips (54 inbound and 36 outbound) occurring during the AM peak hour and 41 trips (21 inbound and 20 outbound) occurring during the PM peak hour. The project trip generation estimates are presented in **Table 4.17-1**.

The project-level impact analysis under CEQA uses the VMT metric to evaluate a project's transportation impacts by comparing against the VMT thresholds of significance established in the city's Transportation Analysis Policy 5-1. The thresholds of significance for development projects are based on the existing regional average VMT level for industrial and office employment uses.

The city's threshold of significance for industrial employment uses is 14.37 VMT per employee (San José 2020). Using the City of San José's VMT Evaluation Tool, the project is estimated to generate a total of 15.07 VMT per employee. Thus, VMT generated by the project without the incorporation of mitigation measures, would exceed the industrial threshold of 14.37 VMT per employee. In consultation with the City of San José, the project owner has proposed a mitigation measure to reduce the VMT impact. Implementation of the measure would provide multi-modal facility improvements and modified employee schedules to reduce the project's VMT impact to a less than significant level. Infrastructure improvements at Ringwood Avenue and Trade Zone Boulevard intersection are multimodal improvements used to promote walking and biking (numbers 1-2). The telecommute and alternative work schedules would reduce employee trips (number 3) (DayZenLLC 2022w). California Energy Commission (CEC) staff has evaluated

2 After applying the ITE trip rates and appropriate trip reductions, the proposed project is estimated to generate a total of 1,072 daily vehicle trips, with 138 trips (94 inbound and 44 outbound) occurring during the AM peak hour and 136 trips (41 inbound and 95 outbound) occurring during the PM peak hour. Source: DayZenLLC 2022w

the measure in the context of impacts to VMT and concludes that the requirements defined in the measure are sufficient. The measure includes the following:

1. Provide Pedestrian Network Improvements for Active Transportation (Tier 2 measure) – Implement pedestrian improvements both on-site and in the surrounding area.

Improving pedestrian connections encourages people to walk instead of drive and reduces VMT. The project owner shall remove the pork-chop islands or provide raised crosswalks at the southwest and southeast corners of the Ringwood Avenue/Trade Zone Boulevard intersection. These improvements will require signal modification and the coordination between the cities of San José and Milpitas and VTA.

2. Provide Traffic Calming Measures (Tier 2 measure) – Implement pedestrian and bicycle safety and traffic calming measures both on-site and in the surrounding neighborhood.

Providing traffic calming measures promotes walking and biking as an alternative to driving. The project owner shall construct a raised median island for the existing left-turn pockets along westbound Trade Zone Boulevard to improve pedestrian safety and access. These improvements will require coordination with the City of Milpitas and VTA.

3. Telecommuting and Alternative Work Schedules (Travel Demand Management measure) – The project owner shall require project employees to telecommute from home when possible, or to shift work schedules such that travel occurs outside of peak congestion periods and commute trips are reduced, thereby reducing VMT. At a minimum, the measure would require that 10 percent of employees work a 4/40 work week schedule (10-hour workdays for four days a week).

The implementation of the Tier 2 and TDM measures described above would reduce the VMT generated by the project to 14.26 per employee, which would be below the industrial VMT threshold of 14.37 VMT per employee. With implementation of **TRANS-1**, the project's impacts to VMT would be reduced to a less than significant level.

TABLE 4.17-1 PROJECT TRIP GENERATION ESTIMATES

ITE Land Use	Reduction %	VMT Existing	Project	Size (s.f.)	AM Peak Hour						PM Peak Hour			
					Daily		Pk-Hr Rate	Trips			Pk-Hr Rate	Trips		
					Rate	Trips		In	Out	Total		In	Out	Total
Proposed Data Center				522,194	0.99	517	0.11	31	26	57	0.09	14	33	47
Proposed Manufacturing				136,573	4.75	649	0.68					31	70	101
Location-Based Vehicle Mode Share Reduction[1]	8%					-93		-8	-4	-12		-4	-8	-12
VMT-Based Reduction[2]	0.07%	15.08	15.07			-1		0	0	0		0	0	0
Total Project Trips						1,072		94	44	138		41	95	136
Existing General Office Building[3]				80,000	10.84	867		40	8	48		20	75	95
Net Project Trips						**205**		**54**	**36**	**90**		**21**	**20**	**41**

Source: DayZenLLC 2022w

Notes:

1 The place type (Suburban with Multi-Family Homes Place Type) for the project site is obtained from the City of San José VMT Evaluation Tool (February 29, 2019). The location-based vehicle mode shares are obtained from Table 6 of the City of San José Transportation Analysis Handbook (April 2020). The trip reductions are based on the percent of mode share for all of the other modes of travel beside vehicle.

2 Existing and project VMTs were estimated using the City of San José VMT Evaluation Tool. It is assumed that every percent reduction in VMT per-employee is equivalent to one percent reduction in peak-hour vehicle trips.

3 Daily trips were estimated based on (existing land use) ITE trip rate for general office building land use #710 and AM and PM peak-hour trips were obtained from driveway counts collected on March 31, 2022.

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Construction

Less Than Significant Impact. Construction activities would occur mostly onsite and not in the public right-of-way, with the exceptions of the new driveway located on Trade Zone Boulevard, connections to domestic water, reclaimed water, fire water, sanitary sewer, fiber, and storm drain that would be made along Trade Zone Boulevard, Ringwood Avenue and Fortune Drive. Required transmission line interconnections would also be made adjacent to the site at the intersection of Trade Zone Boulevard Montague Expressway.

Temporary construction associated with connecting the project site to the existing water and sewer lines are not anticipated to disrupt more than one travel lane at a time. This would ensure at least one or more travel lanes remain open. Project construction would not otherwise temporarily or permanently alter any public roadways or intersections that could result in roadway hazards.

The City of San José, as the permitting agency, would ensure the applicant obtains the proper encroachment permit to minimize disruption to Trade Zone Boulevard during construction. As part of this permit, the City of San José may require the applicant to ensure temporary lane closures and traffic control measures occur according to standard guidelines outlined in the Manual on Uniform Traffic Control Devices, the Standard Specifications for Public Works Construction, and/or the California Joint Utility Traffic Control Manual. The City of San José would also require the project applicant to prepare a Traffic Control Plan to ensure localized traffic control around the project site during deliveries and construction activities would not cause hazards by obstructing roadways. Furthermore, the City of San José, as the permitting agency, would require the project owner obtain all the required permits from Caltrans for any encroachment of state roadway and for the movement of oversized or excessive load vehicles on state roadways, and to submit to Caltrans a Transportation Management Plan, if required for the project, prior to the start of construction. These actions would reduce any hazards from transportation of materials to and from the site and from construction activities affecting roadways.

As discussed under the "Regulatory Background" subsection under Title 14, Part 77.9 of the Code of Federal Regulations, the threshold for the FAA notification 100 to 1 surface exceedance height is 158 feet AGL at the project site. Project construction would require a crane for the placement of the 39 emergency generators and the 77 chillers at the site. If the crane should exceed 158 feet in height, the project applicant would be required to submit Form 7460-1, Notice of Proposed Construction or Alteration, to the FAA. It should be noted, the FAA generally grants a Determination of No Hazard for temporary construction equipment. The City of San José, as the permitting agency for the project,

would ensure consistency with this regulation and compliance with any of the FAA's conditions. For these reasons, project construction would not increase hazards due to a geometric design feature or an incompatible use and impacts would be less than significant.

Operation

Less Than Significant Impact with Mitigation Incorporated.

Access. Vehicular access to and from the parking garage would be provided by a right-turn-only driveway along Trade Zone Boulevard, meaning vehicles entering and existing the parking garage would be required to make a right turn into and out of the garage. Implementation of **TRANS-1** would ensure vehicles would not make an unsafe left-hand turn by constructing an extended raised median along Trade Zone Boulevard. An additional right-turn only driveway along Trade Zone Boulevard would also provide access to the substation and its access gate. Two additional driveways, one along Ringwood Avenue and the other along Fortune Drive, would serve as an entrance and exit for trucks only. Implementation of **TRANS-1** would ensure the operation of the project would not increase surface transportation hazards.

Structure Height. As discussed under the "Regulatory Background" subsection under Title 14, Part 77.9 of the Code of Federal Regulations, the height threshold for FAA notification is 158 feet AGL at the project site. Furthermore, the CLUP identifies that any structure greater than 412 feet AMSL would pose a safety hazard at the site. The project is located approximately 3 miles northeast of the Norman Y. Mineta San José International Airport. Tall structures can potentially pose a hazard to occupants of aircraft, depending on the heights of structures and their proximity to air traffic. The highest point of the proposed project would be approximately 100 feet AGL (DayZenLLC 2022f). The project's maximum structure height of 100 feet would not exceed the FAA's threshold for notification of 100 to 1 surface exceedance height at the project site of 158 feet AGL. As a result, the project applicant would not be required to submit Form 7460-1, Notice of Proposed Construction or Alteration, to the FAA.

Thermal Plumes. The project would involve 39 backup emergency diesel generators and 77 roof-mounted air chillers (DayZenLLC 2022o). The generators would be located at ground level with a stack that extends to a height of 61 feet and the chillers would be located on the data center roof at a height of 84 feet. The project's emergency natural gas generators and chillers would discharge thermal plumes, high-velocity columns of hot air, during operation.

Thermal plume velocities would be greatest at discharge points, with plume velocities decreasing with increasing altitude. Plume velocities would also be highest during certain weather conditions, such as cool temperatures and calm winds. High-velocity thermal plumes have the potential to affect aviation safety, and the FAA Aeronautical Information Manual identifies thermal plumes as potential flight hazards (FAA 2022), though it should be noted that while the FAA regulates the heights of physical structures, it does not

regulate plumes. Aircraft flying through thermal plumes may experience significant air disturbances, such as turbulence and vertical shear. The FAA manual advises that, when able, a pilot should fly upwind of smokestacks and cooling towers to avoid encountering thermal plumes.

CEC staff uses a peak vertical plume velocity of 10.6 meters per second (m/s) (5.3 m/s average plume velocity) as a screening threshold for potential impacts to aviation. Based on a literature search, this velocity generally defines the point at which aircraft begin to experience severe turbulence. To determine whether the project's thermal plumes would exceed 10.6 m/s peak velocity at altitudes where aircraft would fly, the project applicant performed a thermal plume assessment of the emergency diesel-fired generators and chillers (DayZenLLC 2022o). Thermal plumes from these two features are discussed below.

The vertical plume velocity assessment calculated that under worst-case weather conditions, calculation methods, and operating scenarios, the highest vertical velocity of plumes would be from the rooftop chillers. The vertical velocity of plumes from the chillers would not drop below 10.6 m/s until reaching an altitude of 155 feet AGL. The vertical velocity of plumes from the emergency diesel-fired generators would not drop below 10.6 m/s until reaching an altitude of 103 feet AGL.

Furthermore, the existing project site elevation ranges from approximately 40 feet to 77 feet above mean sea level (DayZenLLC 2021a). Considering the most conservative site elevation of 77 feet AMSL, the project's thermal plumes from the rooftop chillers would not drop below 10.6 m/s until reaching an altitude of 232 feet AMSL and the thermal plumes from the emergency generators would not drop below 10.6 m/s until reaching an altitude of 180 feet AMSL. Therefore, the high velocity (10.6 m/s and above) portion of the worst-case plume produced by the chillers and generators would not encroach into the FAA obstruction surface (shown in Figure 6 of the CLUP) of 412 feet AMSL at the project site.

In addition, aircraft would not be expected to be flying low enough over the project site to encounter potentially hazardous thermal plumes produced by the project's emergency diesel-fired generators and chillers. Title 14, Section 91.119 of the Code of Federal Regulations states that unless necessary for takeoff or landing, the minimum safe altitudes for aircraft are 500 feet AGL for non-congested areas and 1,000 feet AGL for congested areas, such as the area around the project site (CFR 2020b). Lastly, according to Aircraft Flight Tracks Figure 3a and 3b in the Santa Clara County CLUP for the Norman Y. Mineta San José International Airport, aircraft departing and arriving at the airport do not pass directly over the site. As a result, impacts to aircraft from thermal plumes are expected to be less than significant.

As discussed above, the project would not result in hazards to aircraft from either a geometric design feature, such as structure height, or incompatible uses, including land

uses or thermal plumes. The project would not increase any other hazards. For these reasons, impacts would be less than significant.

d. Result in inadequate emergency access?

Construction

Less Than Significant Impact. As discussed under criterion "a", above, project construction would include the construction of a new driveway located on Trade Zone Boulevard, connections to domestic water, reclaimed water, fire water, sanitary sewer, fiber, and storm drain that would be made along Trade Zone Boulevard, Ringwood Avenue and Fortune Drive, and required transmission line interconnections that would be made adjacent to the site at the intersection of Trade Zone Boulevard and Montague Expressway. While this construction would require temporary lane blockages or closures on Trade Zone Boulevard, Ringwood Avenue, and Fortune Drive during daytime hours, temporary construction associated with connecting the project site to utility services is not anticipated to disrupt more than one travel lane at a time. Project construction would not otherwise temporarily or permanently alter any public roadways or intersections that could result in roadway hazards.

The City of San José, as the permitting agency, would ensure the project applicant obtains the proper encroachment permit to minimize disruption to Trade Zone Boulevard, Ringwood Avenue, and Fortune Drive during construction. As part of the permit, the City of San José may require the applicant to ensure temporary lane closures and traffic control measures occur according to standard guidelines outlined in the Manual on Uniform Traffic Control Devices, the Standard Specifications for Public Works Construction, and the California Joint Utility Traffic Control Manual. This would ensure emergency vehicle travel on these roads and access to adjacent buildings is not disrupted during the construction of the project. Therefore, the impact would be less than significant.

Operation

Less Than Significant Impact. Vehicular access to and from the parking garage and substation would be provided by two right-turn-only driveways along Trade Zone Boulevard. Two additional driveways, one along Ringwood Avenue and the other along Fortune Drive, would provide access for trucks only. All site access and exit points would be secured by security gates.

The project site plan was reviewed for truck access using truck turning-movement templates for the California legal truck type (WB-50 truck), which is the largest semi-trailer truck that would access the site. Truck turning templates were completed for the loading docks located along the project's internal roadway and the two driveways exclusively serving truck access along Ringwood Avenue and Fortune Drive to determine if adequate site access and on-site circulation would be provided. Left-turn pockets providing inbound and outbound access to and from the project site must be designed to

accommodate the wider turn radii required for larger vehicles. According to the City of San José Department of Transportation (DOT) Geometric Design Guidelines, the typical widths for a one-way driveway and a two-way driveway serving an industrial development are 16 and 32 feet wide. This provides adequate width for vehicular ingress and egress and a reasonably short crossing distance for pedestrians. The driveways along Trade Zone Boulevard are shown to be 26 feet wide while the two-way driveways along Ringwood Avenue and Fortune Drive are shown to be 32 feet wide (DayZenLLC 2022w).

On July 8, 2022, the San José Fire Department (SJFD) submitted a memorandum to the city Planning Department showing the SJFD's initial response to the project's development application. The SJFD conducted a site plan review to ensure compliance with Chapter 5 of the 2019 California Fire Code (CFC) and with City of San José Amendments related to 1) Fire Apparatus Access Roads (CFC Appendix D); 2) Fire-Flow Requirements for Buildings (CFC Appendix B); and 3) Fire Hydrant Locations and Distribution (CFC Appendix C). The review resulted in the identification of several fire code deficiencies based on site plan drawings submitted by the project applicant, dated April 27, 2022. During the city's permitting phase, the applicant would need to resubmit a site plan and written responses to the comments noted in Section 1 of the memorandum prior to planning approval. In addition, the project owner would be required to apply for a fire variance from the City of San José to mitigate the deficiencies identified in the fire department's memorandum (DayZenLLC 2022m). Fire variances typically include increased fire sprinkler density, increased number of standpipes, and multiple exterior stair access points.

The City of San José, as the permitting agency, would ensure the project applicant submits a fire variance for review and approval during the City's permitting phase. The City of San José would also ensure driveways providing truck access to the project site are designed to accommodate the wider turn radii required for larger vehicles and adhere to the city's design guidelines. Lastly, the project would not physically block any access roads or result in traffic congestion that could significantly compromise timely access to this facility or any other location during construction and operation. Therefore, the impact would be less than significant.

4.17.3 Mitigation Measures

TRANS-1: Prior to the issuance of a City of San José occupancy permit, the project shall implement the following:

1. Provide Pedestrian Network Improvements for Active Transportation (Tier 2 measure) – Implement pedestrian improvements both on-site and in the surrounding area.

   Improving pedestrian connections encourages people to walk instead of drive and reduces vehicle miles travelled (VMT). The project owner shall remove the pork-chop islands or provide raised crosswalks at the southwest and southeast corners of the Ringwood Avenue and Trade Zone Boulevard intersection. Improvements will require

signal modification and coordination between the cities of San José and Milpitas and the Santa Clara Valley Transportation Authority (VTA).

2. Provide Traffic Calming Measures (Tier 2 measure) – Implement pedestrian and bicycle safety and traffic calming measures both on-site and in the surrounding neighborhood.

   Providing traffic calming measures promotes walking and biking as an alternative to driving. The project owner shall construct a raised median island for the existing left-turn pockets along the westbound Trade Zone Boulevard to improve pedestrian safety and access. These improvements will require coordination with the City of Milpitas and VTA.

3. Telecommuting and Alternative Work Schedules (Travel Demand Management measure) – The project owner shall require project employees to telecommute from home when possible, or to shift work schedules such that travel occurs outside of peak congestion periods and commute trips are reduced, thereby reducing VMT. At a minimum, the project owner shall require that 10 percent of employees work a 4/40 work week schedule (10-hour workdays for four days a week).

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4.18 Utilities and Service Systems

This section describes the environmental setting and regulatory background and discusses impacts associated with the construction and operation of the project with respect to utilities and service systems.

UTILITIES AND SERVICE SYSTEMS Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

Environmental checklist established by CEQA Guidelines, Appendix G.

4.18.1 Environmental Setting

Potable Water Supply

The project would be supplied with potable water provided by the San Jose Water Company (SJWC). The primary source of water in this area (SJWC 2022a) is surface water imported and treated by the Santa Clara Valley Water District (SCVWD) from the Sacramento-San Joaquin Delta (SCVWD 2022). In 2020 SJMWS delivered 17,546 acre-feet (AF) of potable water and 4,097 AF of recycled water to its service area. The potable water demand in the area between 2020 and 2045 is projected to increase gradually up to 33,552 acre-feet per year (AFY) (San José 2021).

Recycled Water Supply

Recycled water is supplied to the City of San José through the South Bay Water Recycling (SBWR) program. The SBWR obtains advanced tertiary treated water from the San Jose-Santa Clara Regional Wastewater Facility (RWF), formerly known as the San Jose/Santa Clara Water Pollution Control Plant. The RWF is located approximately 3.5 miles northeast of the project site. California Water Code sections 13550 and 13551 include strong language prohibiting the use of potable water where recycled water is available and economically feasible. For example, this would apply to potable water used for cooling electric generators. The San José City Municipal Code and the General Plan have similar requirements. Recycled water would be used at the project for landscaping and cooling purposes. Recycled water pipelines along both Fortune Drive and Ringwood Avenue would serve the proposed project site (DayZenLLC 2021a).

Wastewater Service

The City of San José's Department of Water and Sewer Utilities is responsible for the wastewater collection system within the city. Wastewater is collected by the city's sewer systems and is conveyed by pipelines to the San Jose-Santa Clara RWF. The San Jose-Santa Clara RWF is owned jointly by the cities of San José and Santa Clara and is operated by the City of San José's Department of Environmental Services. The San Jose-Santa Clara RWF has the capacity to treat 167 million gallons per day (million) of wastewater and currently treats an average of 110 mgd, thus the San Jose-Santa Clara RWF facility has 57 mgd, or 34 percent of available capacity. The San Jose-Santa Clara RWF's effluent undergoes advanced tertiary treatment to meet Title 22 recycled water standards, after which approximately 20 percent flows to SBWR's adjacent pump station to be distributed to customers in the area. The remaining 80 percent of the tertiary treated water flows into San Francisco Bay (San José 2022a). The San Jose-Santa Clara RWF's current Wastewater Discharge Requirements (WDRs) were issued by the San Francisco Regional Water Quality Control Board (RWQCB) in September 2014.

Storm Sewer Service

Currently, stormwater from the project site discharges into the City of San José municipal storm drainage system at four locations: one lateral north of the property along Trade Zone Boulevard, two laterals northwest of the property along Ringwood Avenue, and one lateral south of the property along Fortune Drive. Stormwater from the municipal storm drainage system empties into Penitencia Creek, which in turn drains into the San Francisco Bay.

Solid Waste

The site currently generates 230 tons of solid waste per year (DayZenLLC 2021a). Solid waste and recycling collection for businesses at commercial and institutional properties in the City of San José is provided by Republic Services through a contract with the city. Republic Services collects waste using a Wet/Dry system.

San José businesses receive wet collection service for organics, such as food waste, and dry collection service for recyclables and everything else. All waste is sorted locally at the Newby Island Resource Recovery Park. After sorting, recyclable materials are captured for reuse, diverting them from landfills. Organic material is taken to a Zero Waste Energy Development facility, where it is put through an anaerobic digestion process, ultimately producing electricity and compost. Newby Island Landfill, located in San José, provides disposal capacity to nearby cities, including San José, Santa Clara, Cupertino, Los Altos, and Los Altos Hills.

The Newby Island Landfill is permitted to accept a maximum of 3,260 tons of solid waste per day. According to the 5-year review of the Santa Clara County Integrated Waste Management Plan (IWMP) conducted in 2015, the County has adequate disposal capacity beyond 2030 (Santa Clara County 2015). In December 2016, the City of San José Planning Commission approved a vertical expansion of the Newby Island Sanitary Landfill where the permitted height was increased from 150 feet to 245 feet above mean sea level. The approved modification resulted in an increase of approximately 15.12 million cubic yards in the landfill capacity and an estimated closure date of January 2041 (Mercury News 2016).

Electric Power, Natural Gas, and Telecommunications

The project is located in the territory of San Jose Clean Energy (SJCE), a community choice energy program. SJCE procures electricity for its customers while Pacific Gas and Electric Company (PG&E) acts as the distributor of electricity and is responsible for maintaining power lines. SJCE is governed by San José City Council, with input from a Community Advisory Commission (SJCE 2022).

Telecommunication services would be provided by one of several fiber optics providers in the project area, such as CenturyLink, Zayo, AT&T, and others. The applicant anticipates that telecommunication services would be provided to the facility via established rights of way, as is the industry's common practice.

The project utility connections do not include a connection to natural gas, thus no natural gas would be used by the project (DayZenLLC 2022n).

Regulatory Background

Federal

Clean Water Act and California's Porter-Cologne Water Quality Control Act. The State Water Resources Control Board (SWRCB) and its nine RWQCBs are responsible for the regulation and enforcement of the water quality protection requirements of the federal Clean Water Act (CWA) and the state's Porter-Cologne Water Quality Control Act (Porter-Cologne). The National Pollutant Discharge Elimination System (NPDES) is the permitting program that allows point source dischargers to comply with the CWA and Porter-Cologne laws. This regulatory framework protects the beneficial uses of the state's

surface and groundwater resources for public benefit and environmental protection. Protection of water quality could be achieved by the proposed project by complying with applicable NPDES permits from the SWRCB or the San Francisco Bay RWQCB. The San Jose-Santa Clara RWF complies with the Clean Water Act through its current NPDES WDRs, which were issued by the San Francisco RWQCB September 2014.

Under Section 303(d) of the CWA, states are required to identify impaired surface water bodies and develop total maximum daily loads (TMDLs) for contaminants of concern. The TMDL is the quantity of pollutant that can be assimilated by a water body without violating water quality standards. Listing of a water body as impaired does not necessarily suggest that the water body cannot support the beneficial uses; rather, the intent is to identify the water body as requiring future development of a TMDL to maintain water quality and reduce the potential for future water quality degradation. Coyote Creek, east of the project site, is currently listed on the United States Environmental Protection Agency's Section 303(d) Listed Waters for California for diazinon and trash.

The San Francisco Bay RWQCB issued a Municipal Regional Storm Water NPDES Permit (Permit Number CAS612008) that requires the City of San José to implement a storm water quality protection program. This regional permit applies to 77 Bay Area municipalities, including the City of San José. Under the provisions of the Municipal NPDES Permit, redevelopment projects that disturb more than 10,000 square feet are required to design and construct storm water treatment controls to treat post-construction storm water runoff. The permit requires the post-construction runoff from qualifying projects to be treated by using low impact development treatment controls, such as biotreatment facilities.

The Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) assists co-permittees, such as the City of San José, in the implementation of the provisions of the Municipal NPDES Permit. In addition to water quality controls, the Municipal NPDES Permit requires all new and redevelopment projects that create or replace one acre or more of impervious surface to manage development-related increases in peak runoff flow, volume, and duration, where such hydromodification is likely to cause increased erosion, silt pollutant generation, or other impacts to beneficial uses of local rivers, streams, and creeks. Projects may be deemed exempt from the permit requirements under one of the following three conditions; 1) Project will not increase the potential for erosion or other non-beneficial impacts, 2) Project drains into a hardened channel or tidally influenced area, and 3) Project lies within a watershed that is over 90% developed or with greater than 65 percent impervious surface (SCVURPPP 2005). Since the project site is located within an area with greater than 65 percent impervious surface it is not subject to the SCVURPPP hydromodification requirements.

State

California Water Code, Sections 10910-10915. California Water Code (Sections 10910-10915) requires water service providers to evaluate stresses to the water supply service system caused by proposed project developments. The code sections require

public water systems to prepare water supply assessments (WSA) for certain defined development projects subject to the California Environmental Quality Act (CEQA). According to Section 10912, if a project meets any of the seven criteria, then a detailed WSA would be required. Since the project does trigger some of these criteria, a WSA was prepared by the SJWC.

California Energy Efficiency Standards for Residential and Nonresidential Buildings—Green Building Code (2011), Title 24 Update (2014). The California Green Buildings Standards Code applies to planning, design, operation, construction, use, and occupancy of newly constructed buildings and requires installation of energy- and water-efficient indoor infrastructure. The related waste management plan is required to allow for diversion of 50 percent of the generated waste away from the landfill.

Integrated Waste Management Act. The Integrated Waste Management Act of 1989, or Assembly Bill 939 (AB 939), requires cities and counties to reduce, by 50 percent (in reference to 1990 levels), the amount of solid waste disposed of in landfills by the year 2000 and beyond. To comply with the Integrated Waste Management Act, counties adopt regulations and policies to fulfill the requirements of the Act.

California Senate Bill 350 (Renewable Energy Targets). Senate Bill (SB) 350, the Clean Energy and Pollution Reduction Act of 2015 was signed into law by California Governor Jerry Brown on October 7, 2015. This Bill calls for adoption of regulations to increase the procurement of electricity from renewable sources from 33 percent to 50 percent by 2030. SB 350 also requires establishment of annual targets for statewide energy efficiency savings and demand reduction by November 1, 2017. These energy efficiency savings and demand reductions will be designed to achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas use by January 1, 2030.

California Senate Bill 100 (The 100 Percent Clean Energy Act of 2018). SB 100 increases the target procurement of electricity from renewable sources to 60 percent by 2030 from the previous target of 50 percent identified in SB 350. Additionally, SB 100 targets 100 percent of electricity sold in California come from eligible renewable energy resources and zero-carbon resources by 2045. The adoption of SB 100 impacts the implementation of electric power facilities through 2045. The SB 100 Joint Agency Report: *Charting a path to a 100 percent Clean Energy Future*, estimates an increased utility-scale capacity of 145 GW by 2045, which includes in-state and out-of-state renewable sources and energy storage (CARB et al. 2021).

Local

City of San José General Plan. *Envision San José 2040 General Plan* includes numerous policies related to utilities and service systems applicable to all development projects in San José. These policies are designed to provide water supply, sanitary sewer, and storm drainage infrastructure facilities to meet future growth planned within the city and to assure high-quality service to existing and future residents while fulfilling regulatory

requirements. The General Plan sets Measurable Environmental Sustainability (MS) goals and actions for San José through 2040.

- MS-2.8: This measurable action aims to develop policies that promote energy reduction for energy-intensive industries. For facilities such as data centers, which have high energy demand and indirect greenhouse gas emissions, it requires evaluation of operational energy efficiency and inclusion of operational design measures as part of development review consistent with benchmarks such as those in EPA's EnergyStar Program for new data centers. It also requires consideration of distributed power production for these facilities to reduce energy losses from electricity transmission over long distances and energy production methods such as waste-heat reclamation or the purchase of renewable energy to reduce greenhouse gas emissions.
- MS-3.1: Requires water-efficient landscaping for all new development.
- MS-5 and MS-6: These waste diversion and waste reduction goals set policies and actions to achieve solid waste reduction and diversion of 100 percent of waste from landfills by 2022 and maintaining the 100 percent diversion through 2040.
- MS-18.1: Proposes a goal of conserving 50 million gallons of water daily by 2040 through reducing water use and increasing water use efficiency.
- IN-5.3: Use solid waste reduction techniques, including source reduction, reuse, recycling, source separation, composting, energy recovery, and transformation of solid wastes to extend the life span of existing landfills and to reduce the need for future landfill facilities and to achieve the city's Zero Waste goals.

City of San José Municipal Code. The city's Municipal Code includes regulations associated with water conservation and water diversion. City regulations include a Green Building Ordinance (Chapter 17.84) to promote practices to minimize the use of water and other resources in the city of San José, Water Efficient Landscape Standards for New and Rehabilitated Landscaping (Chapter 15.10), and a Construction and Demolition Diversion Deposit Program that encourages recycling of construction and demolition materials (Chapter 9.10).

San José Zero Waste Strategic Plan. The Zero Waste Strategic Plan sets policies to help the city of San José build a healthier community and achieve its Green Vision goals, including 75 percent diversion by 2013 and zero waste by 2022. The Green Vision also includes ambitious goals for economic growth, environmental sustainability, and an enhanced quality of life for San José residents and businesses.

4.18.2 Environmental Impacts

a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Construction and Operation

Less Than Significant Impact. The potable water line would be relocated along with other utility services due to conflicts with the building design; however, this does not represent a significant impact.

The project's wastewater flow during construction and operation would be treated by the RWF, which is monitored by the San Francisco Bay RWQCB to ensure compliance with the facility's NPDES wastewater discharge permit. The RWF is permitted to treat the industrial and sanitary waste flows that would be generated by the project. Furthermore, as discussed under criterion "c", below, the RWF has sufficient available capacity to accommodate the project's estimated wastewater flow. Therefore, the project would not cause the RWF to exceed its wastewater treatment requirements of the San Francisco Bay RWQCB for project construction and operation. The impact of the project on wastewater treatment capacity would be less than significant.

Electricity supply for construction and operation of the proposed project would be procured by SJCE and delivered by PG&E. SJCE has sufficient energy to serve the expected future demand of the project. Project electric demand during construction and operation would not be substantial and would not be expected to affect existing users. While total supply and demand is not published by SJCE, it is continually entering into agreements to procure clean energy from different sources. The project would include a *looped* interconnection constructed by PG&E consisting of two transmission lines (one underground and the other aboveground) linking the project site to Montague Expressway. Potential impacts would be less than significant.

Telecommunication services for the proposed project would be supplied by providers that have been serving the existing businesses in the project area. Those providers have adequate available capacity to accommodate the project needs during construction and operation. The impact of the project on telecommunication services would be less than significant.

The project utility connections do not include a connection to natural gas, thus no natural gas would be used by the project (DayZenLLC 2022n). Therefore, the project would have less than significant impacts on water, wastewater, treatment, storm water drainage, electric power, or telecommunications facilities and no impact on natural gas supplies.

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

Construction and Operation

Less Than Significant Impact. The project is within the SJWC service area. SJWC's primary source of water in the service area (SJWC 2022a) is surface water imported by the Santa Clara Valley Water District (SCVWD) from the Sacramento-San Joaquin Delta (SCVWD 2022).

As noted in the regulatory background, a WSA was prepared by the SJWC. The WSA concluded that the water providers had adequate supply to address needs during normal, single dry, and multiple dry water years during a 20-year projection. The WSA considered a total water demand of 233 AFY of potable water for the project (SJWC 2022b). Project construction is expected to last for about 35 months, during which water demand would be approximately 1.75 AF. Project demand for potable and recycled water during operations is expected to be 11 AFY and 1 AFY respectively. These quantities are well below the amounts analyzed in the WSA. Based on the WSA, there are sufficient quantities of both potable and recycled water for project use, and thus the impact on local water supplies would be less than significant.

c. Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Construction and Operation

Less Than Significant Impact. As stated above in the Environmental Setting subsection, the RWF treats an average of 110 mgd of wastewater, which is 57 mgd less than its 167 mgd treatment capacity. The project would generate a maximum of 8,256 gallons per day (DayZenLLC 2021a), which is less than 0.01 percent of the available treatment capacity of the RWF. Implementation of the proposed project would not result in an increase in the RWF's need for wastewater treatment beyond its design capacity. Therefore, the impact on wastewater treatment facilities would be less than significant.

In addition, the proposed project is designed to be consistent with the development and planned growth assumptions of the Envision San José 2040 General Plan (San José 2022b) and will therefore not result in the RWF exceeding the 120 mgd constraints.

d. Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Construction and Operation

Less Than Significant Impact. Construction activities for the project would result in minor amounts of solid waste. Currently, the project site generates 230 tons of solid waste per year. The solid waste would be disposed of at the Newby Island Landfill in San José. According to the 5-year review of the Santa Clara County Integrated Waste Management Plan (IWMP), the County has adequate disposal capacity beyond 2030 (Santa Clara County 2015). Due to the expansion approved by the City of San José, the Newby Island Landfill has adequate capacity estimated to last through January 2041 (Mercury News 2016). The project would not significantly increase solid waste generation and could be accommodated by existing solid waste facilities, therefore the impact on solid waste facilities would be less than significant.

e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Construction and Operation

No Impact. The California Integrated Waste Management Act of 1989 (Assembly Bill 939) requires local jurisdictions in California to reduce, by 50 percent, the amount of solid waste disposed of in landfills by the year 2000 and beyond. During construction, the project would collect and haul construction debris off-site for recycling or disposal in local jurisdictions that comply with this state requirement and have programs in place to ensure that disposal of solid waste meets these requirements. The project would comply with these requirements pursuant to city requirements. The project would not result in an impact on solid waste collection and would comply with management and reduction regulations. Typically, data centers do not generate special or unique wastes. Likewise, the project would not generate any special or unique wastes that would make the project not comply with federal, state, and local statutes or solid waste management and reduction regulations. Management of hazardous waste and applicable federal regulations are discussed in **Section 4.9 Hazards and Hazardous Materials**.

During operation, the project would comply with federal, state, and local statutes and regulations related to solid waste. There would be no change in compliance with federal, state, or local statutes and regulations related to solid waste management and reduction. No impact would occur.

4.18.3 Mitigation Measures

None required.

4.18.4 References

CARB 2021 et al. 2021 – California Air Resources Board, California Energy Commission and California Public Utility Commission (CARB et al.) (TN 237167). 2021 SB 100 Joint Agency Report, Achieving 100 Percent Clean Electricity in California: An Initial Assessment. Report. CEC-200-2021-001. Page 75. Accessed on: October 31, 2022. Available at https://efiling.energy.ca.gov/GetDocument.aspx?tn=237167&DocumentContentId=70349

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DayZenLLC 2022n – DayZenLLC (DayZenLLC). (TN 246142). STACK Trade Zone Park Revised Project Description, dated September 19, 2022. Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-SPPE-02

DayZenLLC 2022v – DayZenLLC (DayZenLLC). (TN 247069). San Jose Water Company Supply Assessment – TZP, dated October 28, 2022. Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-SPPE-02

Mercury News 2016 – San Jose Mercury News (Mercury News). Milpitas: San Jose planners allow Newby Island Landfill expansion. December 9, 2016. Accessed on October 31, 2022. Available online at: https://www.mercurynews.com/2016/12/09/milpitas-san-jose-planners-allow-newby-island-landfill-expansion

Santa Clara County 2015 – Santa Clara County. Five-Year CIWMP/RAIWMP Review Report. Revised February 2015. Attachment for Recycling and Waste Reduction Commission of Santa Clara County Meeting. June 22, 2016. Accessed on October 31, 2022. Available online at: https://reducewaste.sccgov.org/sites/g/files/exjcpb691/files/Revised%20June%2022%20RWRC%20Packet.pdf

San José 2021 – City of San José (San José). City of San José, 2020 Urban Water Management Plan. June 2021. Accessed on: September 14, 2022. Available online at: https://www.sanjoseca.gov/home/showdocument?id=422

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San José 2022b – City of San José (San José). *Envision San José 2040 General Plan*. Adopted November 1, 2011. Updated July 7, 2022. Accessed on August 23, 2022. Available online at: https://www.sanjoseca.gov/your-government/departments/planning-building-code-enforcement/planning-division/citywide-planning/envision-san-jos-2040-general-plan

SJCE 2022 – San Jose Clean Energy (SJCE). Renewable Energy and Reliability Investments. Accessed on: August 22, 2022. Available online at: https://sanjosecleanenergy.org

SJWC 2022a – San Jose Water Company (SJWC). San Jose Water Service Area and Water Supply Sources Map. Accessed on September 14, 2022. Available online at: https://www.sjwater.com/water-source-map.

SCVURPPP 2005 – Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP). Hydromodification Management Plan. Prepared by the SCVURPPP Management Committee. April 21, 2005.

SCVWD 2022 – Santa Clara Valley Water District (SCVWD). Your Water. Available online at: https://www.valleywater.org/your-water/where-your-water-comes/imported-water#menu

4.19 Wildfire

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the project with respect to wildfires.

WILDFIRE	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
i. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
ii. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
iii. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
iv. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

Environmental criteria established by CEQA Guidelines, Appendix G.

4.19.1 Environmental Setting

Wildfire Hazards

The Department of Forestry and Fire Protection (CalFire) identifies and maps areas of significant fire hazards based on fuels, terrain, and other relevant factors (Cal Fire 2007). These maps categorize this information by Fire Hazard Severity Zones (FHSZ), grouped into unzoned, moderate, high, and very high zones. State Responsibility Areas (SRA) are locations where the state of California is responsible for wildfire protection and Local Responsibility Areas (LRA) are locations where the responding agency is the county or city.

The California Public Utilities Commission (CPUC) categorizes fire threat areas as Tier 1, Tier 2, or Tier 3. Tier 1 (or CalFire Zone 1) encompasses High Hazard Zones (HHZ) on the United States Forest Service (USFS) joint map of Tree Mortality HHZ. This tier represents areas where tree mortality directly coincides with critical infrastructure, such as communities, roads, and utility lines, and are a direct threat to public safety. Tier 2

consists of areas where there is an elevated risk (including likelihood and potential impacts on people and property) from wildfires associated with overhead utility power lines or overhead utility power-line facilities also supporting communication facilities. Tier 3 consists of areas where there is an extreme risk (including likelihood and potential impacts on people and property) from wildfires associated with overhead utility power lines or overhead utility power-line facilities also supporting communication facilities.

The project site is surrounded by commercial, industrial, and some residential development in the city of San José and is not located in or near a SRA or a very high FHSZ, or land classified as having a fire threat by the CPUC. The city of San José is also not within a FHSZ (Cal Fire 2007) at the wildland and urban interface and is not in the vicinity of wildlands.

Regulatory Background

Federal

No federal regulations related to wildfires apply to the project.

State

Fire Hazard Severity Zones (Pub. Resources Code, § 4201 et seq.). The purpose of this designation is to provide for the classification of lands within SRAs in accordance with the severity of fire hazard present and identify measures to be taken to retard the rate of spreading and to reduce the potential intensity of uncontrolled fires that threaten to destroy resources, life, or property.

Fire Hazard Severity (Cal. Code Regs, tit. 14, § 1280 et seq.). FHSZs reflect the degree of severity of fire hazard.

CPUC General Order 95: Rules for Overhead Electric Line Construction. CPUC General Order (GO) 95, Section 35 (revised January 2020), covers all aspects of design, construction, operation, and maintenance of overhead electrical lines and the management of safety hazards. Its application would ensure adequate service and safety to persons engaged in the construction, maintenance, operation, or use of overhead lines and to the public in general.

CPUC General Order 166: Standards for Operation, Reliability, and Safety During Emergencies and Disasters. CPUC GO 166 (revised May 20, 2021) covers the standards that require all electric utilities to be prepared for emergencies and disasters in order to minimize damage and inconvenience to the public that may occur as a result of electric system failures, major outages, or hazards posed by damage to electric distribution facilities.

Local

Santa Clara County Operational Area Hazard Mitigation Plan. The plan includes a risk assessment that identifies the natural hazards and risks that can impact a community based on historical experience, estimate the potential frequency and magnitude of disasters, and assess potential losses to life and property. The plan also includes developed mitigation goals and objectives as part of a strategy for mitigating hazard-related losses.

4.19.2 Environmental Impacts

a. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

i. Substantially impair an adopted emergency response plan or emergency evacuation plan?

Construction

No Impact. During project construction, traffic levels would experience a minimal increase that is not expected to degrade traffic performance significantly. Emergency response access during construction would not be significantly impeded. The project would not involve the development of structures that could potentially impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. No streets would be closed, rerouted, or substantially altered during construction.

Additionally, the project is not located in or near a SRA, or a very high FHSZ, or land classified as having a fire threat by the CPUC.

Operation

No Impact. The project would not add a large number of people to the local area as discussed in **Section 4.14 Population and Housing** and thereby increasing emergency response demand during a potential evacuation. Thus, the project would not interfere with the coordination of the County of Santa Clara's emergency operations plan at the emergency operations center or alternate emergency operations center, and the project would not interfere with any statewide emergency response or evacuation routes or plans. Adequate emergency access to the project site and surrounding area would be maintained.

Additionally, the project would not be located in or near a SRA, or a very high FHSZ, or land classified as having a fire threat by the CPUC.

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

Construction and Operation

No Impact. The topography of the project site is flat, and the area surrounding the project is a mixture of commercial, industrial, and some residential development with minimal slopes. Therefore, project construction would not exacerbate wildfire risk or expose occupants to pollutant concentrations from a wildfire.

Additionally, the project would not be located in or near a SRA, or a very high FHSZ, or land classified as having a fire threat by the CPUC.

iii. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Construction

Less Than Significant Impact. The project would construct several offsite linear features that include a potable water line, a reclaimed water line, a sanitary sewer line, an electrical supply line, and a stormwater drainage line. The construction of these utilities would not block access to any road or result in traffic congestion. The potable, reclaimed, stormwater, and sanitary lines would be underground utilities that travel through developed land or follow existing paved roadways. Therefore, the constructed electrical supply line and other project infrastructure would not constitute a possible ignition source for local vegetation and would not block access to any road or result in traffic congestion.

Additionally, the project would not be located in or near a SRA, or a very high FHSZ, or land classified as having a fire threat by the CPUC.

Operation

Less Than Significant Impact. The project would not require the installation of associated infrastructure that could exacerbate fire risk or result in impacts to the environment. Maintenance of the project and proposed utilities would not physically block any access roads or result in traffic congestion that could significantly compromise timely access to this facility or any other location.

Additionally, the project would not be located in or near a SRA, or a very high FHSZ, or land classified as having a fire threat by the CPUC.

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

Construction

No Impact. The project would not substantially alter local drainage patterns. Stormwater discharge during construction would be managed according to the project's Storm Water Pollution Prevention Plan. The project would, therefore, not be expected to contribute to a flooding hazard on site or off site. For further discussion of the potential flooding impacts that could result from the construction of the proposed project, please see the discussion in **Section 4.10 Hydrology and Water Quality**.

As discussed in this section, the topography of the project site and surrounding area is relatively flat. Therefore, the project would not be exposed to post-fire slope instability or drainage changes.

Additionally, the project would not be located in or near a SRA, or a very high FHSZ, or land classified as having a fire threat by the CPUC.

Operation

No Impact. The operation of the project would not alter the course of a drainage (stream or river) and would not substantially alter local drainage patterns. The proposed on-site storm drainage system would be designed to meet the city's stormwater drainage standards and sized adequately to convey water away from the site and to the city of San José's storm drain system. The project would, therefore, not contribute to a flooding hazard on site or off site.

As discussed in this section, the topography of the project site and surrounding area is relatively flat and previously developed with existing commercial and industrial facilities. Therefore, the project would not be exposed to post-fire slope instability or drainage changes.

Additionally, the project would not be located in or near a SRA, or a very high FHSZ, or land classified as having a fire threat by the CPUC.

4.19.3 Mitigation Measures

None required.

4.19.4 References

Cal Fire 2007 – Department of Forestry and Fire Protection (CalFire). *Santa Clara County Fire Hazard Severity Zones in State Responsibility Area, Adopted by Cal Fire on November 7, 2007*. Accessed on: April 5, 2022. Available online at: https://osfm.fire.ca.gov/media/6766/fhszs_map43.pdf

4.20 Mandatory Findings Of Significance

This section describes impacts specific to mandatory findings of significance associated with the construction and operation of the project.

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

Environmental checklist established by CEQA Guidelines, Appendix G.

a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant with Mitigation Incorporated.

Biology Resources

Less Than Significant with Mitigation Incorporated. With mitigation, the project would not substantially degrade the quality of the environment, reduce the existing habitat of any fish or wildlife species, cause any fish or wildlife population to drop below self-

sustaining levels, threaten to eliminate any plant or animal community, or substantially reduce the number or restrict the range of a rare, threatened, or endangered species.

The immediate area around the proposed project site is a mix of residential, commercial, and industrial development. The project site is paved and has two existing buildings that will be demolished this year with permits obtained from the city of San José. Any habitat remaining on the proposed project site is highly disturbed and ornamental. Trees located onsite and adjacent to the proposed project site do provide perching and nesting potential for avian species.

Additionally, the site is 5 miles southeast of the San Francisco Bay, which empties into the Guadalupe and Alviso sloughs, and is about four miles southeast of the Don Edwards San Francisco Bay National Wildlife Refuge. In general, areas surrounding the project site are rich in abundance and diversity of flora and fauna, including the San José/Santa Clara Regional Wastewater Treatment Plant sludge drying beds to the north, which provide habitat for shorebirds and waterbirds, and associated wildlife species may occur as transients on the site.

The project proponent proposed a wide variety of avoidance and mitigation measures. Staff reviewed these, and, where necessary, proposed additional measures that supplanted gaps in the mitigation package, or replaced proposed measures with additional, refined language. Staff has proposed measures to ensure that no significant impacts to special status plants or wildlife occur on or adjacent the project site, such as the development and implementation of a worker environmental awareness program known as a WEAP (**BIO-1**), preconstruction surveys and best practices for burrowing owl (**BIO-2**), preconstruction surveys and best practices for migratory nesting birds (**BIO-3**), reporting requirements and preparation of an Avian Protection Plan (**BIO-4**), and a one-time nitrogen deposition fee compliant with the Santa Clara Valley Habitat Plan (**BIO-5**). **Table 4.20-1** provides a summary table of proposed mitigation measures, which are fully reported in **Section 4.4 Biological Resources**.

TABLE 4.20-1: AVOIDANCE AND MITIGATION MEASURES	
BIO-1	Worker Environmental Awareness Program (WEAP)
BIO -2	Burrowing Owl Surveys, Monitoring, Prevention and Relocation
BIO -3	Nesting Bird Avoidance and Minimization Measures
BIO -4	Avian Reporting and Avian Protection Plan
BIO -5	Non-Point Source Nitrogen Deposition Fee

With implementation of the above mitigation and avoidance measures, the project would not substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of a rare or endangered plant or animal.

Cultural and Tribal Cultural Resources

Less Than Significant with Mitigation Incorporated. Important examples of the major periods of California history or prehistory represented by historical, unique archaeological, or tribal cultural resources are not known to be present in the project site. However, the extent of proposed ground disturbance has the potential to damage unknown, buried archaeological resources in the project site. As described in **Section 4.5 Cultural and Tribal Cultural Resources**, the majority of archaeological resources aged about 5,000 years or older are buried beneath the ground surface. If these resources were to be exposed or destroyed, it would be a significant impact. Implementation of **CUL-1** through **CUL-3**, included in **Section 4.5 Cultural and Tribal Cultural Resources** would reduce the impacts to buried cultural resources to a less-than-significant level. The proposed project therefore is unlikely to significantly impact cultural resources from major periods of California history or prehistory, therefore the impact would be less than significant.

Geology and Soils

Less Than Significant with Mitigation Incorporated. Significant paleontological resources that represent important examples of the major periods of California prehistory are known to be present in the project area. The extent of proposed ground disturbance has the potential to damage unknown, buried paleontological resources in the project footprint. As described in **Section 4.7 Geology and Soils**, paleontological resources may be buried beneath the ground surface in Pleistocene age sediments. Five fossil sites have been found at or near the ground surface within several miles of the project site, particularly along stream beds (UCMP 2022). If significant paleontological resources were to be exposed or destroyed, it would be a significant impact. Adherence to the city of San José General Plan (San José 2022) policies (ER-10.1, ER-10.3, and ER-10.4), and implementation of **GEO-1** included in **Section 4.7 Geology and Soils** would reduce the impacts to buried paleontological resources to a less-than-significant level. The proposed project therefore is unlikely to eliminate important examples of paleontological resources that are part of the prehistory of California, therefore the impact would be less than significant.

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

Less Than Significant with Mitigation Incorporated. The analysis of cumulative impacts can employ one of two methods to establish the effects of other past, current, and probable future projects. A lead agency may select a list of projects, including those outside the control of the agency, or, alternatively, a summary of projections. These projections may be from an adopted general plan or related planning document, or from a prior environmental document that has been adopted or certified, and these documents

may describe or evaluate the regional or area-wide conditions contributing to the cumulative impact.

General Plan Projection

This section evaluates cumulative impacts using the *Addendum to the Envision San José 2040 General Plan Final Program Environmental Impact Report and Supplemental Program Environmental Impact Report* (San José 2021) and the *Final Environmental Impact Report for the Envision 2040 General Plan* (San José 2011) documents, collectively referred to below as the General Plan FPEIR. The General Plan FPEIR identified that build out of the *Envision San José 2040 General Plan* (General Plan) would contribute to five, significant and unavoidable cumulative impacts in the areas of biological resources, land use and agricultural resources, noise, population and housing, and transportation (San José 2011).

General Plan Significant Unavoidable Impacts

The General Plan FPEIR identified the following significant unavoidable environmental impacts applicable to the proposed project:

- Biological Resources – Cumulative development would result in emissions of nitrogen compounds that could affect the species composition and viability of sensitive grasslands.
- Land Use and Agricultural Resources – Build-out of the General Plan in the north Coyote Valley area in conjunction with other planned or proposed development would make a cumulatively considerable contribution to cumulative impacts on agricultural resources.
- Noise – Increased development in the South Bay Area will result in a significant increase in traffic noise levels on roadway segments throughout the region, beyond accepted noise thresholds in various communities.
- Population and Housing – Build-out of the General Plan in conjunction with other planned development would contribute cumulatively to impacts arising from a regional jobs-housing imbalance.
- Transportation – Build-out of the General Plan in conjunction with other planned development in the South Bay Area would result in a substantial contribution to cumulatively significant regional transportation impacts on roadways and highways.

With the exception of impacts to agriculture and forestry resources, the project, in combination with future development in the city of San José, could conceivably have a significant cumulative impact to these environmental resources; however, the following discussion demonstrates how the project's contribution to these impacts would be less than cumulatively considerable and thus less than significant with the incorporation of mitigation identified in this project EIR.

Biological Resources

Less Than Significant with Mitigation Incorporated. With a projected increase in vehicle miles traveled, beyond or above the growth in population and employment, implementation of the General Plan would contribute to increased oxides of nitrogen (NOx) emissions in the San Francisco Bay Area Basin. Regional nitrogen deposition impacts to serpentine habitats in southern San José and Santa Clara County is a cumulative issue that is addressed through the SCVHP; except emissions from point sources (e.g., generators). As described in **Section 4.4 Biological Resources**, nitrogen deposition leads to the enhancement of invasive non-native weeds, which is a result of the cumulative emissions of many sources within the region.

To be consistent with the SCVHP, the project owner is required to pay a nitrogen deposition fee, in-lieu of providing compensatory mitigation, for projects that result in atmospheric nitrogen emissions. Vehicles are considered a "non-point" source because they are mobile. The fee is determined by the number of new vehicle trips for the proposed project. However, this nitrogen deposition fee is only assessed on mobile emission sources because it was not feasible to calculate impacts from point source emissions at the time the SCVHP was being prepared (SCVHP 2012). The project's backup generators would also contribute (as a point source of emissions) to nitrogen deposition; therefore, staff also analyzed nitrogen deposition from the testing and maintenance of the backup generators to potential sensitive habitats.

The proposed project would generate a maximum of 205 daily vehicle trips during operations over existing site conditions (DayZenLLC 2022w). For new daily vehicle trips, the nitrogen deposition fee is calculated by taking the number of new daily vehicle trips and multiplying it by the nitrogen deposition fee of $5.85 (currently) (SCVHA 2022). For permanent impacts the daily vehicle trips (205) multiplied by $5.85 results in a nitrogen deposition fee of $1,199.25. **BIO-5** would require the one-time payment of a nitrogen deposition fee, which would reduce impacts from non-point sources to below the level of significance (exact fees to be updated annually by the Santa Clara Valley Habitat Agency and paid by the project owner). With incorporation of **BIO-5**, project impacts associated with point source nitrogen deposition would be cumulatively considerable.

For nitrogen deposition from a point source (backup generators), two NOx-sensitive habitats occur within six miles of the project site: California red-legged frog and serpentine habitat. Staff considered nitrogen emissions and contribution to nitrogen deposition to these habitats. However, modeling and mapping prepared by Air Quality staff and Biological Resources staff have determined that project nitrogen deposition levels in these habitats would be zero kg N/ha/year, and therefore, no incrementally cumulative impacts would occur (see **Figure 4.4.-1**, **Figure 4.4-2** in **Section 4.4 Biological Resources, Appendix C,** and **Section 4.3 Air Quality**).

Land Use and Agricultural Resources

Less Than Significant Impact. A significant land use impact could occur if a project would divide a community or conflict with any land use plan, policy, or regulation adopted for

the purpose of avoiding or mitigating an environmental effect. The project would be developed on two adjacent parcels that have already been developed and that do not serve as connections between areas of a community; thus, the project would not divide a community. With the project's proposed rezone from Industrial Park to Transit Employment Center – Planned Development, the project would be consistent with the General Plan and the city of San José Zoning Code and would not conflict with land use plans or policies in such a way as to cause significant impacts. (See **Section 4.11 Land Use and Planning** for details.) Also, the proposed project would not involve uses that could cause unmitigated hazardous or nuisance impacts. (See **Sections 4.3 Air Quality**, **4.9 Hazards and Hazardous Materials**, **4.13 Noise**, and **4.17 Transportation**, which evaluate the project's potential impacts relating to nuisance effects and hazards.) For these reasons, the project would not cause significant land use impacts, and there would be no cumulative impacts from conflicts with local land use regulations.

No Impact. As discussed in **Section 4.2 Agriculture and Forestry Resources**, the Farmland Mapping and Monitoring Program (FMMP) classification of the project site is Urban and Built-Up Land, which is a non-agricultural designation. The project parcels are developed and not zoned for agricultural uses or forest land or under a Williamson Act contract. Therefore, the project would not convert Farmland or forest land to other uses, and no direct or cumulative impacts to Farmland or forest land would occur.

Noise

Less Than Significant with Mitigation Incorporated. Construction activities could elevate the existing ambient noise levels at the nearest residences by up to 11 dBA (adjusted decibels) and could be perceived as noisy. The loudest construction work could elevate the existing ambient noise levels at nearby commercial and office buildings by up to about 9 dBA. The implementation of mitigation measure **NOI-1**, requiring a noise complaint and redress process, would ensure construction noise impacts as perceived by the community would be less than significant. **NOI-1** would also include several appropriate measures to reduce and control construction-related noise, limit construction work to daytime hours, and require notifying project site neighbors of the construction schedule.

Since the project is near a residential land use, noise reduction measures, such as mechanical equipment enclosures and parapet walls, would be required (incorporated in the operational noise modeling). Thus, the operational noise levels would comply with the city's noise limits and would not elevate the existing ambient noise levels at the nearest residences.

The project's construction noise impacts would be reduced to a less than significant level with **NOI-1** and the operational noise impacts would be less than significant. Therefore, the project noise impacts would not be cumulatively considerable.

Population and Housing

Less Than Significant Impact. The General Plan FPEIR identified significant impacts from the job growth allowed under the General Plan. The General Plan FPEIR concluded that

substantial residential development could be required elsewhere in the region to provide adequate housing opportunities to future workers. As described in **Section 4.14 Population and Housing**, the project would not displace any people or housing, or necessitate construction of replacement housing elsewhere. Operation of the project is anticipated to require approximately 339 employees (70 employees for the SVY Data Center and 269 employees for the advanced manufacturing building). The project's construction and operation workforce would not directly or indirectly induce a substantial population growth in the project area. Therefore, the project's contribution to the jobs-housing imbalance would not be cumulatively considerable.

Transportation

Less Than Significant with Mitigation Incorporated. The General Plan FPEIR anticipates significant traffic impacts from the build-out of the General Plan. As discussed in **Section 4.17 Transportation**, implementation of **TRANS-1** would reduce the project generated VMT to a level below the city's industrial employment uses threshold and reduce the project impact to a less than significant level. With implementation of **TRANS-1**, the project's contribution to cumulative transportation impacts during project construction and operation would not be cumulatively considerable.

Other Technical Areas

Although the city's General Plan FPEIR did not identify significant effects in the areas of air quality, cultural resources, and geology (paleontology), and did not include an analysis of impacts to tribal cultural resources as the General Plan FPEIR was adopted before the passage of AB52 requiring such analysis, CEC staff concluded that the project's impacts in these areas are *less than significant with mitigation*. Thus, staff has considered whether the project would contribute to cumulatively considerable impacts in these areas. Staff has also included an analysis of potential cumulative impacts for the other technical areas where project impacts would be *less than significant.*

Aesthetics

Less Than Significant Impact. The proposed project would be constructed on relatively flat land in a highly developed urban area within the northern portion of the city of San José.

As discussed in **Section 4.1 Aesthetics**, review of the city General Plan, and aerial and street view imagery concluded the project site is not within a scenic vista, and there is no recognized scenic resource on the site or in the vicinity that the project would block its public view.

The project is within an "urbanized area" as defined by Public Resources Code section 21071. It would be consistent with policies in the General Plan and conform with zoning governing scenic quality.

The construction and operation of the project would not create a new source of substantial light, glare, or reflectivity adversely affecting day or nighttime views in the area.

The project and new or foreseeable projects within this urbanized area would not conflict with applicable city zoning and other regulations governing scenic quality.

The project is an employment center project located on an infill site within a transit priority area as defined in Public Resource Code section 21099. In accordance with Public Resources Code section 21099(d)(1), "Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment."

For these reasons, the project's construction and operational aesthetics impacts would be less than significant and not cumulatively considerable.

Air Quality

Less Than Significant with Mitigation Incorporated. The proposed project would be located in Santa Clara County in the San Francisco Bay Area Air Basin (SFBAAB), under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The SFBAAB is designated as a nonattainment area for ozone and particulate matter with a diameter of 2.5 microns or less (called "PM2.5") under both California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS). The SFBAAB is also designated as nonattainment for particulate matter with a diameter of 10 microns or less (called "PM10") under CAAQS, but not NAAQS. SFBAAB's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. In developing thresholds of significance for air pollutants, BAAQMD considers the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. CEQA would then require implementation of all feasible mitigation measures.

The demolition and construction emissions of the project would be lower than the thresholds of significance from the BAAQMD CEQA Air Quality Guidelines. There is no numerical threshold for fugitive dust generated during construction in BAAQMD. BAAQMD considers fugitive dust emissions to be potentially significant without incorporation of basic construction mitigation measures, also called best management practices (BMPs). The applicant would be required to incorporate the BAAQMD's recommended BMPs and staff identifies this as mitigation measure **AQ-1**. Therefore, the project's construction emissions would not be cumulatively considerable.

During readiness testing and maintenance, the oxides of nitrogen (NOx) emissions of the emergency backup generators are estimated to exceed the BAAQMD significance

threshold of 10 tons per year. All other pollutants would have estimated emissions rates below BAAQMD significance thresholds. The NOx emissions from the emergency backup generator readiness testing and maintenance would be required to be fully offset through the BAAQMD permitting process. Therefore, the project's emissions during readiness testing and maintenance would not be cumulatively considerable.

As discussed in **Section 4.3 Air Quality**, the daily average and annual emissions of criteria air pollutants and precursors during total project operation would not exceed any applicable threshold of significance, and the project would not result in a cumulatively significant emissions increase. Therefore, the project emissions during operation, including readiness testing and maintenance would not be cumulatively considerable.

Applicant and staff completed criteria pollutant air quality impact analyses of potential generator operation at any hour of the year. These analyses found that the concentrations from operation of the standby engine generators would not cause any exceedance of ambient air quality standards. Therefore, the project's criteria air pollutant impacts from project operation, including readiness testing and maintenance would be less than significant.

Due to the infrequent nature of emergency conditions and the record of highly reliable electric service available to the project (see **Appendix B**), the project's emergency operations would be unlikely to expose sensitive receptors to substantial concentrations of criteria air pollutants or toxic air contaminants.

The health risk assessment (HRA) shows that the project's health risk impacts would not exceed BAAQMD significance thresholds during construction, emergency backup generator readiness testing and maintenance, and the overlap period where construction activity and the testing of a portion of the generators would occur simultaneously. The project would not expose sensitive receptors to substantial toxic air contaminant concentrations during construction or emergency backup generator readiness testing and maintenance. Therefore, the project's air quality impacts would not be cumulatively significant.

Cultural and Tribal Cultural Resources

Less Than Significant Impact with Mitigation Incorporated. The General Plan FPEIR does not specifically address impacts on tribal cultural resources. Historical resources and unique archaeological resources, as defined by CEQA, share several of the impact vulnerabilities that tribal cultural resources face, especially the effects of ground-disturbing activities. In addition, historical and unique archaeological resources can also qualify as tribal cultural resources. The suite of mitigation measures for cultural resources presented in the General Plan FPEIR would reduce the severity of some impacts on tribal cultural resources. No known tribal cultural resources have been found on the project site, although ground disturbance associated with the proposed project could result in the exposure and destruction of buried, as-yet unknown archaeological resources that could qualify as tribal cultural resources. Implementation of **CUL-1** through **CUL-3** would

prevent, minimize, or compensate for impacts on buried, tribal cultural resources. Project impacts to tribal cultural resources therefore would not be cumulatively considerable.

Energy and Energy Resources

Less Than Significant Impact. The project would use 36 Tier 4 renewable diesel-fired gensets for emergency backup generation, and three small renewable diesel-fired generators for administration needs. The total number of hours of operation from the gensets for operational reliability purposes would be limited to no more than 50 hours annually.

At a rate of 50 hours, the total quantities of renewable diesel as primary fuel or ultra-low sulfur diesel (ULSD or conventional) as secondary fuel used for all the generators operating at full load would be approximately 9,178 barrels per year (bbl/yr). California has renewable diesel and USLD fuel supply of approximately 6,300,000 bbl/yr and 310,000,000 bbl/yr, respectively. The project's use of renewable diesel or ULSD fuel constitutes a small fraction (less than 0.14 or 0.003 percent, respectively) of available resources. Both renewable diesel and ULSD fuel supply are more than sufficient to meet necessary demand of the project. For these reasons, the project's use of fuel would be less than significant.

The project's consumption of energy resources during operation would not be inefficient or wasteful, as discussed in **Section 4.6 Energy and Energy Resources**. Project operation would have a less than significant adverse effect on local or regional energy supplies and energy resources and likewise, would not be cumulatively considerable.

Geology and Soils

Less Than Significant with Mitigation Incorporated. The General Plan identifies two policies (ER-10.1 and ER-10.3) that specifically address impacts on paleontological resources (San José 2022). Paleontological resources can be impacted by the effects of ground-disturbing activities. Five fossil sites have been found at or near the ground surface within several miles of the project site, particularly along stream beds (UCMP 2022). The suite of mitigation measures for paleontological resources presented in the General Plan FPEIR would reduce the severity of some impacts on paleontological resources. No known paleontological resources have been found on the project site. Ground disturbance associated with the proposed project could result in the exposure and destruction of buried, as-yet unknown paleontological resources that could qualify as significant paleontological resources. Implementation of **GEO-1** would prevent, or minimize, impacts on buried paleontological resources. Project impacts to paleontological resources therefore would not be cumulatively considerable.

Greenhouse Gas Emissions

Less Than Significant Impact with Mitigation Incorporated. The BAAQMD CEQA Air Quality Guidelines do not identify a numerical greenhouse gas (GHG) emissions threshold for construction-related emissions. Instead, BAAQMD recommends that GHG emissions from

construction be quantified and disclosed and the impacts be determined in relation to meeting Assembly Bill (AB) 32 GHG reduction goals. The BAAQMD further recommends incorporation of BMPs to reduce GHG emissions during construction, as feasible and applicable. The project's construction emissions would be in conformance with state and local GHG emissions reduction goals, so impacts would be less than significant.

For readiness testing and maintenance-related emissions, the BAAQMD 2017 CEQA Air Quality Guidelines states that for stationary-source projects, the threshold to determine the significance of an impact from GHG emissions is 10,000 metric tons per year of carbon dioxide equivalent ($MTCO_2e/yr$). However, in November 2021, BAAQMD staff was in the process of preparing and presenting to the BAAQMD board for approval an update to the CEQA GHG threshold of significance for stationary sources to 2,000 $MTCO_2e/yr$ or compliance with the State Air Resources Board's (CARB) cap-and-trade program. However, this proposed update to the BAAQMD threshold of significance has not been adopted as of the date of this analysis. As a stationary source, the emergency backup generators would not have a cumulatively considerable contribution to GHGs if emissions are below the applicable BAAQMD CEQA GHG threshold.

Other project-related emissions from mobile sources, area sources, energy use and water use, would not be included for comparison to the stationary source threshold of significance, based on BAAQMD's 2017 CEQA Guidelines. Instead, in April 2022, the BAAQMD updated thresholds of significance for land use projects and plans. Under option B of the BAAQMD's 2022 CEQA thresholds of significance for land use projects, a CEQA lead agency can conclude that a project will not make a cumulatively considerable contribution to global climate change if the project is designed and built to be consistent with the applicable local GHG reduction strategy that meets the criteria under State CEQA Guidelines section 15183.5(b). GHG impacts from project related indirect and non-stationary emissions sources would be considered to have a less-than-significant impact if the project is consistent with the city of San José's 2030 GHG Reduction Strategy. Other applicable regulatory programs and policies adopted by CARB or other California agencies, described under Regulatory Background, also contribute to staff's analysis of GHG impacts.

Mitigation measure **GHG-1** in **Section 4.8 Greenhouse Gas Emissions** would ensure the project owner would use renewable diesel for 100 percent of total energy use by the emergency backup generators, and only use ultra-low sulfur diesel as a secondary fuel in the event of supply challenges or disruption in obtaining renewable diesel. Mitigation measure **GHG-2** would require the project owner to participate in the San José Clean Energy at the Total Green level (i.e., 100 percent carbon-free electricity) for electricity accounts associated with the project, or enter into an electricity contract with San José Clean Energy or participate in a clean energy program that accomplishes the same goals of 100 percent carbon-free electricity as the San José Clean Energy Total Green Level. With the implementation of mitigation measures **GHG-1** and **GHG-2**, the project would ensure that the project-related emissions would not significantly add to the global problem of climate change, nor would the project hinder California's ability to reach

California's GHG reduction goals in any significant way, even when considered cumulatively.

Additionally, the project would implement efficiency measures to meet California green building standards, and additional voluntary efficiency and use reduction measures. As such, with mitigation measures identified in **Section 4.8 Greenhouse Gas Emissions**, GHG emissions related to the project would not conflict with the city of San José GHG Reduction Strategy or other plans, policies, or regulations adopted for the purpose of reducing the emissions of GHGs. Therefore, the project's GHG emissions would not be considered cumulatively significant.

Hazards and Hazardous Materials

Less Than Significant with Mitigation Incorporated. As discussed in **Section 4.9 Hazards and Hazardous Materials,** ground disturbing activities associated with grading and construction activities of the project would have the potential to encounter contaminated soil. Implementation of **HAZ-1** and **HAZ-2** would require a site mitigation plan (SMP) to be created along with a Health and Safety Plan (HSP). The SMP would establish proper procedures to be taken when contaminated soil is found and how to dispose of the contaminated soil properly. The HSP would establish worker training and provide provisions for personal protective equipment and procedures in the event contaminated soil is encountered. In addition, if contaminated soils are found in concentrations above thresholds, the project would halt construction and the contaminated soil would be treated in place or removed to an appropriate disposal facility. With the implementation of **HAZ-1** and **HAZ-2,** the construction of the project would create a less than significant impact to the public or the environment.

The proposed project would use hazardous materials in small quantities associated with construction. These hazardous materials would be stored in designated construction staging areas in compliance with local, state, and federal requirements. Any diesel fuel transported on site would also comply with the extensive regulatory framework that applies to the shipment of hazardous materials. In addition, the project owner would implement procedures and safety features and precautions that would reduce the risk of an accidental hazardous materials release. Therefore, the impact from the use, transport, disposal, or accidental release of hazardous materials would be cumulatively significant.

Hydrology and Water Quality

Less Than Significant Impact. The project would be required to comply with the city of San José's Post-Construction Urban Runoff Policy No. 6-29, the Municipal National Pollutant Discharge Elimination System Permit, and the Santa Clara Valley Urban Runoff Pollution Prevention Program. The plans and permits work together to establish specific requirements to reduce storm water pollution from new and redevelopment projects, singularly and cumulatively. With implementation as described in **Section 4.10 Hydrology and Water Quality** of this analysis, these standards would protect the watershed receiving discharge from the project from a cumulatively considerable impact to the basin's hydrology. Similarly, these same plans and permits would be protective of

water quality. These standards would be protective of the quality, of both surface water and groundwater bodies, receiving discharge from the project.

Public Services

Less Than Significant Impact. As discussed in **Section 4.15 Public Services**, the construction and operation of the project would not result in substantial adverse physical environmental impacts associated with the provision of new or physically altered fire and police service facilities in order to maintain acceptable service ratios, response times, or other performance objectives. The project would be consistent with the planned growth in the General Plan. The project facilities would conform with applicable building and fire codes.

In accordance with California Government Code Section 65996, the project would be required to pay the appropriate school impact fees to the East Side Union High School District and Orchard Elementary School District. Operation of the project is anticipated to require approximately 339 employees, which would all be hired locally from the Bay Area. Even if the operation workforce would relocate closer to the project site, the additional population would be consistent with growth projections and service ratios in the General Plan and thus the project would not cause significant environmental impacts associated with the provision of new or physically altered park and other public facilities in order to maintain acceptable service ratios or other performance objectives. The project's impacts to public services would not be cumulatively considerable.

Recreation

Less Than Significant Impact. As discussed in **Section 4.16 Recreation**, the project does not require or propose the construction or expansion of recreation facilities. Operation of the project would require approximately 339 employees. The project's operation workforce would be consistent with growth projections and service ratios in the General Plan and thus the project would not increase the use of existing parks or recreational facilities to the extent that substantial physical deterioration of the park or facility would result. The project's impacts to recreation would not be cumulatively considerable.

Utilities and Service Systems

Less Than Significant Impact. As discussed in **Section 4.18 Utilities and Service Systems**, adequate water supply as well as water and wastewater treatment capacity are available to serve the project. Likewise, there are adequate telecommunication and natural gas resources in the project area to meet the project's needs.

The city of San José has available landfill capacity at the Newby Island Landfill through 2041. The current landfill impacts are addressed within an ongoing Santa Clara County Integrated Waste Management Plan to provide waste disposal services. The project would generate minimal operational waste as data centers typically require very little equipment turnover. Additionally, the project does not include a residential component and would

not generate any increases in the supply and demand of utility services and infrastructure. Therefore, the project's contribution to utilities and service systems cumulative impacts would not be cumulatively considerable.

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

Less Than Significant Impact with Mitigation Incorporated. The proposed project would not cause substantial adverse effects on human beings either directly or indirectly. The proposed project would result in less than significant temporary impacts to human health during construction, including changes to air quality, and exposure to geologic hazards, noise, and hazardous materials. As discussed in **Section 4.3 Air Quality**, with implementation of **AQ-1**, which includes the BAAQMD's recommended BMPs for fugitive dust and construction equipment emissions, the project would result in a less than significant impact related to human health. As discussed in **Section 4.7 Geology and Soils**, impacts to people or property associated with geologic or seismic conditions onsite would be less than significant. The project would result in temporary noise impacts to humans during construction and intermittently during operation. As discussed in **Section 4.13 Noise**, noise impacts would be less than significant with the inclusion of **NOI-1**. As discussed in **Section 4.9 Hazards and Hazardous Materials**, hazards impacts would be less than significant with the implementation of **HAZ-1** and **HAZ-2**. As discussed in **Section 4.10 Hydrology and Water Quality**, water quality impacts would be less than significant. No additional impacts to human beings would occur during operation and maintenance activities.

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4.21 Environmental Justice

This section describes the environmental setting and regulatory background and discusses impacts specific to environmental justice associated with the construction and operation of the proposed project.

4.21.1 Setting

The United States Environmental Protection Agency (U.S. EPA) defines environmental justice (EJ) as, "the fair treatment and meaningful involvement of all people regardless of race, color, national origin or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies" (U.S. EPA 2015, pg. 4).

The "Environmental Justice in the CEC Site Certification Process" subsection immediately below describes why EJ is part of the California Energy Commission's (CEC's) site certification process or in this case the SPPE application review process, the methodology used to identify an EJ population, and the consideration of data from the California Environmental Protection Agency's (CalEPA) California Communities Environmental Health Screening Tool (CalEnviroScreen 4.0). Below that, the "Environmental Justice Project Screening" subsection presents the demographic data for those people living in a six-mile radius of the project site and a determination on presence or absence of an EJ population. When an EJ population is identified, the analysis in 10 technical areas[1] and Mandatory Findings of Significance consider the project's impacts on this population and whether any impacts would disproportionately affect the EJ population. Lastly, the "Project Outreach" subsection discusses the CEC's outreach program specifically as it relates to the proposed project.

Environmental Justice in the CEC Site Certification Process

President Clinton's Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," focuses federal attention on the environment and human health conditions of minority communities and calls on federal agencies to achieve environmental justice as part of their mission. The order requires the U.S. EPA and all other federal agencies (as well as state agencies receiving federal funds) to develop strategies to address this issue. The agencies are required to identify and address any disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations.

The California Natural Resources Agency recognizes that EJ communities are commonly identified as those where residents are predominantly minorities or live below the poverty level; where residents have been excluded from the environmental policy setting or

1 The 10 technical areas are Aesthetics, Air Quality, Cultural and Tribal Cultural Resources, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Population and Housing, Transportation, and Utilities and Service Systems. Cultural and Tribal Cultural Resources considers impacts to Native American populations.

decision-making process; where they are subject to a disproportionate impact from one or more environmental hazards; and where residents experience disparate implementation of environmental regulations, requirements, practices, and activities in their communities. Environmental justice efforts attempt to address the inequities of environmental protection in these communities.

An EJ analysis is composed of the following:

- Identification of areas potentially affected by various emissions or impacts from a proposed project;
- Providing notice in appropriate languages (when possible) of the proposed project and opportunities for participation in public meetings, if any, to EJ communities;
- A determination of whether there is a significant population of minority persons, or persons below the poverty level, living in an area potentially affected by the proposed project; and
- A determination of whether there may be a significant adverse impact on a population of minority persons or persons below the poverty level caused by the proposed project alone, or in combination with other existing and planned projects in the area.

California law defines EJ as "the fair treatment of people of all races, cultures and income with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies" (Gov. Code, § 65040.12; Pub. Resources Code, §§ 71110-71118). All departments, boards, commissions, conservancies and special programs of the Resources Agency must consider EJ in their decision-making process if their actions have an impact on the environment, environmental laws, or policies. Such actions that require EJ consideration may include:

- adopting regulations;
- enforcing environmental laws or regulations;
- making discretionary decisions or taking actions that affect the environment;
- providing funding for activities affecting the environment; and
- interacting with the public on environmental issues.

Bay Area Air Quality Management District Community Health Programs

The project site is located within the Bay Area Air Quality Management District (BAAQMD). BAAQMD has community health programs intended to reduce air pollution disparities in the San Francisco Bay Area. The Community Health Protection Program is BAAQMD's local implementation of the California Air Resources Board's (CARB) Community Air Protection Program, as enacted by Assembly Bill (AB) 617 (C. Garcia, Chapter 136, Statutes of 2017). The statewide Community Air Protection Program requires CARB to develop a new community-focused program to reduce exposure more effectively to air pollution and preserve public health and to take measures to protect communities disproportionally impacted by air pollution. CARB is required to select the highest priority locations in the

state for the deployment of community air monitoring systems and select locations around the state for the preparation of community emissions reduction programs. CARB's governing board has selected 17 communities for a community emissions reduction program (CARB 2022). The project site is not located in an AB 617 community.

The Community Air Risk Evaluation (CARE) program was implemented by BAAQMD to identify areas in the Bay Area that experience a disproportionate share of air pollution exposure. One goal of the CARE program is to identify areas where air pollution contributes most to health impacts and where populations are most vulnerable to air pollution[2]. The proposed project is not located in a CARE community.

CalEnviroScreen - More Information About an EJ Population

CalEnviroScreen is a science-based mapping tool used by CalEPA to identify disadvantaged communities[3] pursuant to Health and Safety Code section 39711 as enacted by Senate Bill (SB) 535 (De León, Stats. 2012 Ch. 830). As required by state law, disadvantaged communities are identified based on geographic, socioeconomic, public health, and environmental hazard criteria. CalEnviroScreen identifies impacted communities by taking into consideration pollution exposure and its effects, as well as health and socioeconomic status, at the census-tract level (OEHHA 2021, page 8).

The CalEnviroScreen model consists of four components in two broad categories. The Exposure and Environmental Effects components comprise a Pollution Burden category, and the Sensitive Populations and Socioeconomic Factors components comprise a Population Characteristic category. The four components are made up of environmental, health, and socioeconomic data from 21 indictors.

The CalEnviroScreen score presents a relative, rather than an absolute, evaluation of pollution burdens and vulnerabilities in California communities by providing a relative ranking of communities across the state (OEHHA, 2021 page 8). Calculating the CalEnviroScreen scores begins by assigning percentile scores to the 21 statewide indicators, which fall into two categories of population burden and population characteristics. The percentiles are averaged for the set of indicators in each of the four components (Exposures, Environmental Effects, Sensitive Populations, and Socioeconomic Factors). These four components in turn, are combined to yield an overall CalEnviroScreen score (CalEPA 2022a, pg. 5-6). Each category has a maximum score of

2 https://www.baaqmd.gov/community-health/community-health-protection-program/community-air-risk-evaluation-care-program

3 The California Environmental Protection Agency, for purposes of its Cap-and-Trade Program, defines communities in terms of census tracts and identifies four types of geographic areas as disadvantaged: (1) census tracts receiving the highest 25 percent of overall scores in CalEnviroScreen 4.0; (2) census tracts lacking overall scores in CalEnviroScreen 4.0 due to data gaps, but receiving the highest 5 percent of CalEnviroScreen 4.0 cumulative pollution burden scores; (3) census tracts identified in the 2017 DAC designation as disadvantaged, regardless of their scores in CalEnviroScreen 4.0; (4) and areas under the control of federally recognized Tribes (CalEPA 2022a).

10, and, thus, the maximum CalEnviroScreen score is 100. Based on these scores, census tracts across California are ranked relative to one another. Values for the various components are shown as percentiles, which indicate the percent of all census tracts with a lower score. A higher percentile indicates a higher potential relative burden. A percentile does not describe the magnitude of the difference between two tracts, but rather it simply tells the percentage of tracts with lower values for that indicator (OEHHA 2021, page 20).

Table 4.21-1 lists the indicators that go into the Pollution Burden score and the Population Characteristics score to form the final CalEnviroScreen score. These indicators are used to measure factors that affect the potential for pollution impacts in communities.

TABLE 4.21-1 COMPONENTS THAT FORM THE CALENVIROSCREEN 4.0 SCORE

Pollution Burden	
Exposure Indicators	**Environmental Effects Indicators**
Children's lead risk from housing	Cleanup sites
Diesel particulate matter (PM) emissions	Groundwater threats
Drinking water contaminants	Hazardous waste
Ozone concentrations	Impaired water bodies
PM 2.5 concentrations	Solid waste sites and facilities
Pesticide use	
Toxic releases from facilities	
Traffic density	
Population Characteristics	
Sensitive Populations Indicators	**Socioeconomic Factors Indicators**
Asthma emergency department	Educational attainment
Cardiovascular disease (emergency department visits for heart attacks)	Housing burdened low-income households
Low birth-weight infants	Linguistic isolation
	Poverty
	Unemployment

Notes: PM= particulate matter. PM 2.5= fine particulate matter 2.5 microns or less. Source: OEHHA 2021

Part of staff's assessment of how, or if, the project would impact an EJ population includes a review of CalEnviroScreen data for the project area. There are three technical areas that could have project impacts that could combine with the indicators in CalEnviroScreen: Air Quality, Hydrology and Water Quality, and Utilities and Service Systems.

The CalEnviroScreen indicators relevant to each of the three technical areas are:

- For air quality, these indicators are asthma, cardiovascular disease, diesel particulate matter (PM) emissions, low birth-weight infants, ozone concentrations, pesticide use, PM with diameters of 2.5 micrometers or smaller (PM2.5) concentrations, toxic releases from facilities, and traffic density.
- For hydrology and water quality, these indicators are drinking water contaminants, groundwater threats, and impaired water bodies.

- For utilities and service systems, these indicators are cleanup sites, hazardous waste, and solid waste sites and facilities.

When these technical areas have identified a potential project impact where an EJ population is present, CalEnviroScreen is used to better understand the characteristics of the areas where the impact would occur and ensure that disadvantaged communities in the vicinity of the proposed project have not been missed when screened by race and ethnicity, and low income.

Note that CalEnviroScreen is not intended to:

- substitute for a cumulative impact analysis under the California Environmental Quality Act (CEQA);
- restrict the authority of government agencies in permit and land use decisions; or,
- guide all public policy decisions.

Project Outreach

As a part of the U.S. EPA's definition of EJ, meaningful involvement is an important part of the siting process. Meaningful involvement occurs when:

- those whose environment or health would be potentially affected by the decision on the proposed activity have an appropriate opportunity to participate in the decision;
- the population's contribution can influence the decision; and
- the concerns of all participants involved are considered in the decision-making process.

The CEC staff and the Office of the Public Advisor, Energy Equity, and Tribal Affairs (PAO) coordinated closely on public outreach early in the project review process. The PAO outreach contact consisted of emails to environmental justice organizations, schools and school districts, labor unions and trade associations, community centers, daycare centers, park departments, and religious organizations within a six-mile radius of the proposed project.

CEC staff posted to the project's docket and mailed to the project mail list a Notice of Receipt of the STACK Trade Zone Park (or project) Small Power Plant Exemption (SPPE) Application on May 6, 2022. The Notice of Receipt was also mailed to EJ organizations and similar interest groups. Based on current U.S. Census English fluency data for the population residing in the cities and communities within a six-mile radius of the project site, translation of project notices was deemed appropriate. U.S. Census data also showed that of those who report they "Speak English less than very well", the predominant languages spoken were Spanish, Vietnamese, and Chinese. Mandarin was the more commonly spoken dialect of Chinese. Public notices for the project were published in local newspapers in English and Chinese (Mandarin) on May 10, 2022. Public notices for the project were published in local newspapers in Spanish and Vietnamese on May 6, 2022, and May 12, 2022, respectively.

In accordance with the Governor's Executive Order B-10-11, the CEC's Tribal Consultation Policy, the CEC's Siting Regulations, and CEQA, staff conducted outreach and consultation with regional tribal governments. Additional information regarding the outreach efforts and specific groups contacted can be found in **Section 4.5 Cultural and Tribal Cultural Resources**.

As described in **Section 2 Introduction**, staff mailed the Notice of Receipt of the Application for Small Power Plant Exemption to adjacent occupants and property owners within 1,000 feet of the project site and 500 feet of the linear facilities.

Environmental Justice Project Screening

Figure 4.21-1 shows 2020 census blocks in a six-mile radius of the project with a minority population greater than or equal to 50 percent (U.S. Census 2020). The population in these census blocks represents an EJ population based on race and ethnicity as defined in the U.S. EPA's *Guidance on Considering Environmental Justice During the Development of Regulatory Actions* (U.S. EPA 2015).

Based on California Department of Education data in **Table 4.21-2** and presented in **Figure 4.21-2**, staff concludes that the percentage of those living in the school districts of Alum Rock Union Elementary, Luther Burbank Elementary, Orchard Elementary, and San José Unified school districts (in a six-mile radius of the project site) are enrolled in the free or reduced-price meal program is larger than those in the reference geography (Santa Clara County). Thus, the populations in these school districts are considered an EJ population based on a low income population as defined in *Guidance on Considering Environmental Justice During the Development of Regulatory Actions*.

TABLE 4.21-2 LOW INCOME DATA WITHIN THE PROJECT AREA

Santa Clara School District in a Six-Mile Radius of the Project Site	Enrollment Used for Meals	Free or Reduced Price Meals	
Alum Rock Union Elementary	**9,226**	**7,053**	**76.4%**
Berryessa Union Elementary	6,258	1,751	27.0%
Luther Burbank Elementary	**437**	**364**	**83.3%**
Milpitas Unified	10,072	2,883	28.6%
Orchard Elementary	**765**	**319**	**41.7%**
Santa Clara Unified	14,028	3,645	26.0%
San José Unified	**26,901**	**10,087**	**37.5%**
Reference Geography			
Santa Clara County	241,326	79,000	32.7%

Alameda County School District in a Six-Mile Radius of the Project Site	Enrollment Used for Meals	Free or Reduced Price Meals	
Fremont Unified	33,873	6,179	18.2%
Reference Geography			
Alameda County	214,602	87,363	40.7%

Note: **Bold** indicates school districts considered having an EJ population based on low income
Source: CDE 2022.

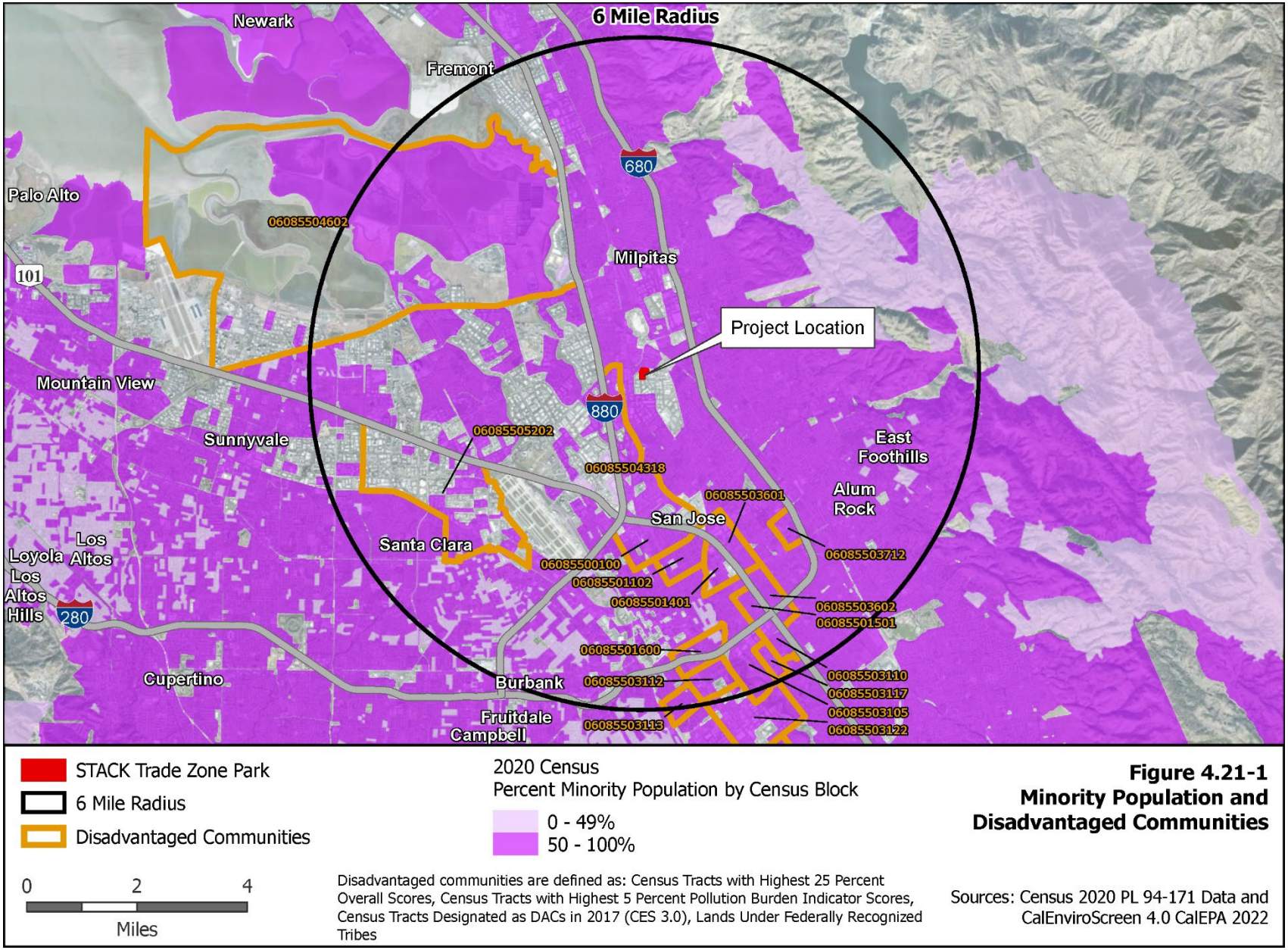

Figure 4.21-1
Minority Population and Disadvantaged Communities

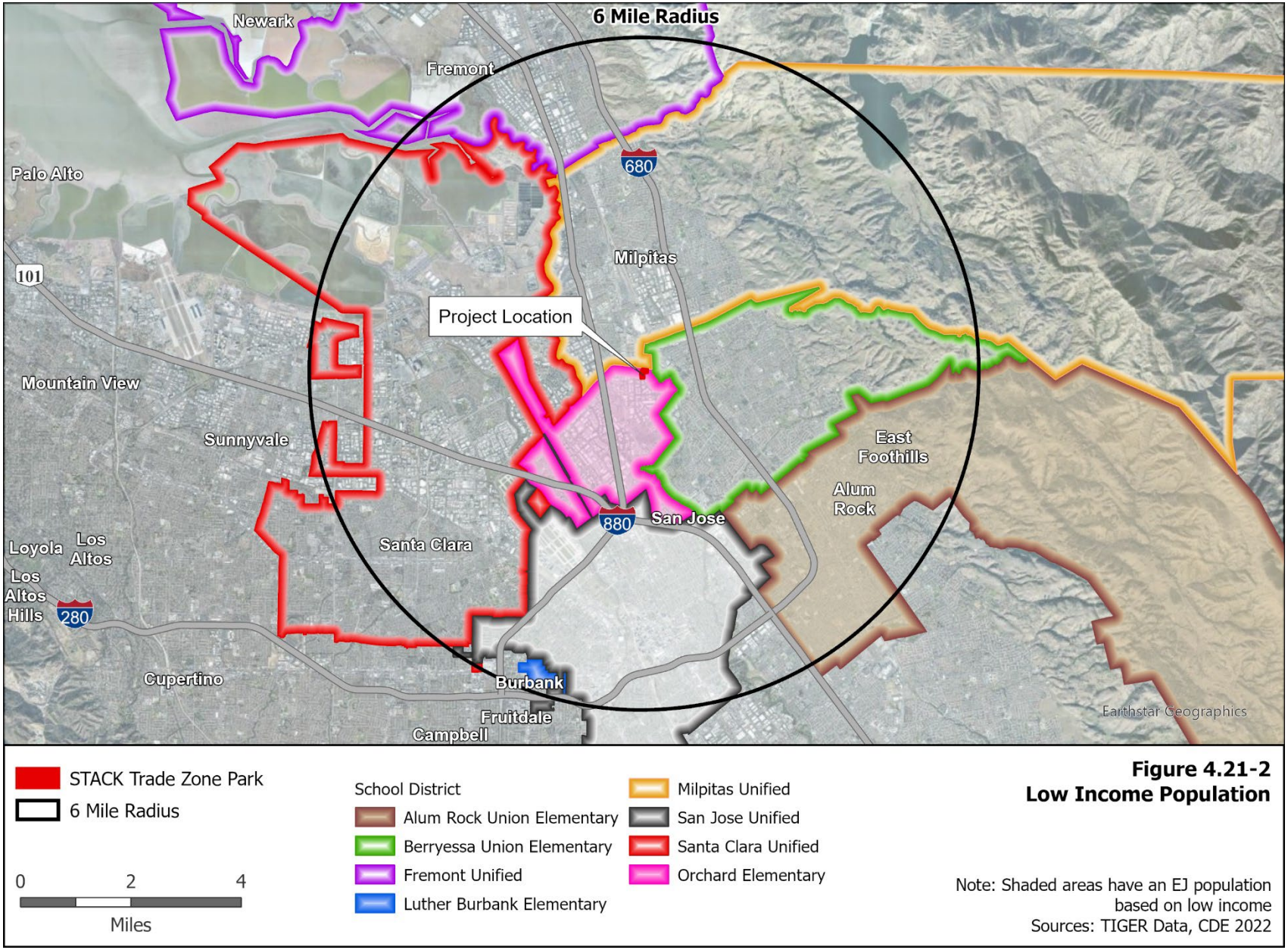

Figure 4.21-2
Low Income Population

Note: Shaded areas have an EJ population based on low income
Sources: TIGER Data, CDE 2022

CalEnviroScreen - Disadvantaged Communities

CalEnviroScreen 4.0 was used to gather additional information about the population potentially impacted by the proposed project. The CalEnviroScreen indicators (see **Table 4.21-1**) are used to measure factors that affect the potential[4] for pollution impacts in communities. Staff used CalEnviroScreen to identify disadvantaged communities[5] in the vicinity of the proposed project and better understand the characteristics of the areas where impacts would occur.

Table 4.21-3 presents the CalEnviroScreen overall scores and disadvantaged communities (DAC) category for the DAC within a six-mile radius of the project site. The location of each of these census tracts is shown on **Figure 4.21-1.**

TABLE 4.21-3 CALENVIROSCREEN SCORES FOR DISADVANTAGED COMMUNITIES

Census Tract No.	Total Population	CES 4.0 Percentile	Pollution Burden Percentile	Population Characteristics Percentile	DAC Category
06085504602	2,355	66.97	82.46	49.76	CES 3.0 DAC Only
06085505202	6,936	59.53	86.86	37.92	CES 3.0 DAC Only
06085504318	6,095	80.06	88.82	63.28	CES 4.0 top 25 percent
06085503601	3,383	85.36	84.12	76.94	CES 4.0 top 25 percent
06085500100	8,306	71.19	89.77	50.16	CES 3.0 DAC Only
06085501102	4,305	71.32	79.53	57.83	CES 3.0 DAC Only
06085501401	3,226	71.72	67.98	66.69	CES 3.0 DAC Only
06085501600	7,716	85.01	77.80	81.48	CES 4.0 top 25 percent
06085503112	4,141	77.50	75.68	70.34	CES 4.0 top 25 percent

4 It is important to note that CalEnviroScreen is not an expression of health risk and does not provide quantitative information on increases of impacts for specific sites or project. CalEnviroScreen uses the criteria of "proximity" to a hazardous waste site, a leaking underground tank, contaminated soil, an emission stack (industry, power plant, etc.) to determine that a population is "impacted". It does not address general principles of toxicology: exposure pathways and dose/response. For certain toxic chemicals to pose a risk to the public, offsite migration pathways must exist (through ingestion, inhalation, dermal contact, etc.) and contact to a certain amount – not just any amount – must exist.

5 The California Environmental Protection Agency (CalEPA), for purposes of its Cap-and-Trade Program, has defines communities in terms of census tracts and identifies four types of geographic areas as disadvantaged: (1) census tracts receiving the highest 25 percent of overall scores in CalEnviroScreen 4.0; (2) census tracts lacking overall scores in CalEnviroScreen 4.0 due to data gaps, but receiving the highest 5 percent of CalEnviroScreen 4.0 cumulative pollution burden scores; (3) census tracts identified in the 2017 DAC designation as disadvantaged, regardless of their scores in CalEnviroScreen 4.0; (4) and areas under the control of federally recognized Tribes. (CalEPA 2022a).

TABLE 4.21-3 CALENVIROSCREEN SCORES FOR DISADVANTAGED COMMUNITIES

Census Tract No.	Total Population	CES 4.0 Percentile	Pollution Burden Percentile	Population Characteristics Percentile	DAC Category
06085503113	5,052	67.75	62.85	63.46	CES 3.0 DAC Only
06085503712	4,484	75.77	40.05	94.52	CES 4.0 top 25%
06085503602	5,602	75.71	49.27	87.28	CES 4.0 top 25 percent
06085501501	4,623	71.03	49.88	79.37	CES 3.0 DAC Only
06085503110	4,917	77.17	50.57	88.65	CES 4.0 top 25 percent
06085503117	3,071	59.32	27.54	79.53	CES 3.0 DAC Only
06085503105	2,460	78.97	70.19	76.61	CES 4.0 top 25 percent
06085503122	3,602	69.25	67.59	61.68	CES 3.0 DAC Only

Note: Disadvantaged communities by census tract in the project's six-mile radius. Source: CalEPA 2022b

Table 4.21-4 presents the CalEnviroScreen percentiles for the indicators that make up the pollution burden percentile. **Table 4.21-5** presents the CalEnviroScreen percentiles for the indicators that make up the population characteristics.

TABLE 4.21-4 CALENVIROSCREEN INDICATOR PERCENTILES FOR POLLUTION BURDEN FOR DISADVANTAGED COMMUNITIES

Census Tract No.	Percentiles													
	Pollution Burden	Ozone	PM2.5	Diesel PM	Drinking Water	Lead	Pesticides	Toxic Release	Traffic	Cleanup Sites	Groundwater Threats	Hazardous Waste	Impaired Water Bodies	Solid Waste
06085504602	82.46	15.05	19.43	29.00	39.04	50.59	0.00	30.32	94.13	99.38	94.17	93.21	91.87	99.95
06085505202	86.86	17.65	22.50	79.33	50.17	56.66	1.97	37.85	82.46	99.85	98.41	98.37	33.16	95.01
06085504318	88.82	20.85	33.71	90.49	22.74	52.73	4.97	39.48	94.31	99.74	96.73	99.85	33.16	99.77
06085503601	84.12	20.85	35.76	91.50	22.74	93.48	0.00	33.02	91.00	81.02	62.49	91.36	33.16	84.74
06085500100	89.77	20.85	37.86	89.71	22.74	70.23	3.59	35.00	81.73	98.11	96.26	98.99	43.78	97.87
06085501102	79.53	20.85	36.85	63.71	22.74	91.30	0.41	33.76	68.21	83.85	88.01	86.45	33.16	91.43
06085501401	67.98	20.85	37.19	78.38	22.74	83.02	0.00	33.03	87.66	62.04	73.75	28.30	33.16	85.22
06085501600	77.80	20.85	37.13	95.13	22.74	83.20	0.79	32.10	79.25	50.56	91.57	65.18	43.78	77.96
06085503112	75.68	22.19	35.54	89.82	22.74	57.69	0.00	31.56	62.36	72.81	93.52	77.02	43.78	91.04
06085503113	62.85	20.85	32.20	79.96	22.74	88.75	0.00	32.12	77.06	33.87	92.98	35.98	33.16	70.42
06085503712	40.05	20.85	34.18	87.99	22.74	58.49	0.00	31.16	95.96	0.00	43.85	88.48	12.45	0.00
06085503602	49.27	22.19	41.56	95.30	22.74	75.97	0.00	31.20	94.83	0.00	62.73	78.98	12.45	0.00
06085501501	49.88	20.85	38.97	94.82	22.74	77.82	0.00	31.41	98.70	0.00	66.45	11.08	33.16	44.31
06085503110	50.57	22.19	38.56	96.17	22.74	60.89	0.00	30.83	99.54	0.00	63.71	24.71	33.16	54.85
06085503117	27.54	22.19	37.62	44.54	22.74	52.79	0.00	30.66	58.18	18.70	47.43	16.64	33.16	64.40
06085503105	70.19	22.19	38.77	83.48	22.74	24.39	0.00	30.98	91.53	70.42	82.32	75.96	33.16	94.57
06085503122	67.58	22.19	33.20	80.29	22.74	29.12	0.00	30.31	53.55	80.37	94.89	87.65	33.16	98.79

Notes: Disadvantaged communities by census tract in the project's six-mile radius. Source: CalEPA 2022b

TABLE 4.21-5 CALENVIROSCREEN INDICATOR PERCENTILES FOR POPULATION CHARACTERISTICS FOR DISADVANTAGED COMMUNITIES

Census Tract No.	Percentiles								
	Population Characteristics	Asthma	Low Birth Weight	Cardiovascular Disease	Education	Linguistic Isolation	Poverty	Unemployment	Housing Burden
06085504602	49.76	37.96	98.85	40.00	73.42	NA	27.85	36.44	23.80
06085505202	37.92	28.61	54.62	47.52	55.80	15.64	35.15	4.89	89.21
06085504318	63.28	36.05	71.79	28.12	78.63	95.72	59.52	78.97	46.02
06085503601	76.94	73.54	77.05	53.39	79.42	95.03	78.45	21.11	63.26
06085500100	50.16	66.59	54.12	42.40	66.31	76.64	40.80	17.11	26.17
06085501102	57.83	69.65	61.41	45.03	65.20	67.72	34.70	52.52	37.48
06085501401	66.69	60.99	73.33	31.68	79.73	93.80	65.93	29.41	62.42
06085501600	81.48	72.98	91.34	39.71	63.76	67.45	80.28	64.51	94.47
06085503112	70.34	54.97	73.76	25.87	75.22	86.13	72.40	66.61	73.41
06085503113	63.46	53.23	49.62	17.24	91.09	63.04	82.54	57.25	92.84
06085503712	94.52	88.43	93.65	71.62	83.23	97.48	64.90	56.19	95.67
06085503602	87.28	88.33	44.47	71.54	90.36	96.21	71.42	72.53	83.94
06085501501	79.37	81.90	30.59	59.88	89.52	95.21	69.16	81.69	71.15
06085503110	88.65	79.21	53.85	66.05	96.71	95.99	87.39	69.13	83.94
06085503117	79.53	79.47	33.95	66.44	90.94	98.06	79.55	49.86	77.21
06085503105	76.61	62.33	55.85	39.46	86.36	99.49	69.35	76.05	81.32
06085503122	62.68	44.14	65.36	16.65	81.70	95.29	87.50	15.84	91.46

Note: Disadvantaged communities by census tract in the project's six-mile radius. Source: CalEPA 2022b

4.21.2 Environmental Impacts

The following technical areas discuss impacts to EJ populations: Aesthetics, Air Quality[5], Cultural and Tribal Cultural Resources, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Population and Housing, Transportation, and Utilities and Service Systems.

Part of staff's assessment of how, or if, the project would impact an EJ population includes a review of CalEnviroScreen data for the project area. There are three technical areas that could have project impacts that could combine with the indicators in CalEnviroScreen: Air Quality, Hydrology and Water Quality, and Utilities and Service Systems. When these technical areas have identified a potential impact where an EJ population is present, CalEnviroScreen is used to better understand the characteristics of the areas where the impact would occur and ensure that disadvantaged communities in the vicinity of the proposed project have not been missed when screened by race and ethnicity, and low income.

Aesthetics

Less Than Significant Impact. A disproportionate impact pertaining to Aesthetics to an EJ population may occur if a project is in proximity to an EJ population and the following:

- The project, if in an "urbanized area" per Public Resources Code section 21071, conflicts with applicable zoning and other regulations governing scenic quality.
- The project, if in a non-urbanized area, substantially degrades the existing visual character or quality of the public view of the site and its surroundings.
- The project creates a new source of substantial light, glare, and reflectivity that adversely affects day or nighttime views in the area.

As discussed in **Section 4.1 Aesthetics** the project is in an urbanized area. The project conforms to the applicable city zoning and other regulations governing scenic quality.

Staff viewed aerial, surface and street imagery, topographic and other maps, and the EJ section EJ figures, and concludes the nearest EJ populations would have no or restricted public views of the project due to existing aboveground landscape components (buildings, structures, earthworks, trees, etc.) and distance.

The project would include outdoor lighting for driveways, entrances, walkways, parking areas, and security purposes. Outdoor lighting would be angled downward onsite and include light visors, light hoods, and utilize lighting controls to reduce energy usage. Light emitting diode (LED) lighting fixtures would be installed throughout the project site. The project's exterior surfaces and finishes described and shown on the building elevations include coatings, colors, materials, and textures that would have none to low reflectivity offsite.

In accordance with Public Resources Code § 21099(d)(1), "Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment."

For the reasons discussed above, the project would have a less than significant effect to an EJ population for the purposes of Aesthetics. Any effect created by the project would not be disproportionate.

Air Quality

Less Than Significant with Mitigation Incorporated. **Table 4.21-4** and **Table 4.21-5** include indicators that relate to both air quality and public health. The indicators that are associated with criteria pollutants such as ozone and PM2.5 are indicators related to air quality. Indicators that are associated with protecting public health are: Diesel PM, Pesticide Use, Toxic Release from Facilities, Traffic Density, Asthma, Low Birth Weight Infants, and Cardiovascular Disease. Each of these air quality and public health indicators are summarized below.

Ambient air quality standards (AAQS) are established to protect the health of even the most sensitive individuals in our communities, which includes the EJ population, by defining the maximum amount of a pollutant that can be present in outdoor air without harm to the public's health. Both CARB and the U.S. EPA are authorized to set AAQS.

Staff identified the potential air quality impacts (i.e., ozone and PM2.5) that could affect the EJ population represented in **Figures 4.21-1** and **4.21-2**. Staff also examined individual contributions of indicators in CalEnviroScreen that are relevant to air quality (see **Table 4.21-4**).

Staff identified the potential public health impacts (i.e., cancer and non-cancer health effects) that could affect the EJ population represented in **Figures 4.21-1** and **4.21-2**. These potential public health risks were evaluated quantitatively based on the most sensitive population, which includes the EJ population, by conducting a health risk assessment (HRA). The results were presented by levels of risk. The potential construction and emergency backup generator (gensets) readiness testing and maintenance risks are associated with exposure to diesel PM.

In **Section 4.3 Air Quality**, staff concludes that, with the implementation of mitigation measure **AQ-1**, the project would not have a significant impact on air quality or public health. Criteria pollutants would not cause or contribute significantly to exceedances of health-based ambient standards and the project's toxic air emissions would not exceed health risk limits. Likewise, the project would not cause disproportionate air quality or public health impacts on sensitive populations, such as the EJ population represented in **Figures 4.21-1** and **4.21-2**.

The following addresses each of the air quality and public health indicators included in **Tables 4.21-4** and **4.21-5**.

Ozone Impacts

Ozone is known to cause numerous health effects, which can potentially affect EJ communities as follows:

- lung irritation, inflammation and exacerbation of existing chronic conditions, even at low exposures (Alexis et al. 2010, Fann et al. 2012, Zanobetti and Schwartz 2011);
- increased risk of asthma among children under 2 years of age, young males, and African American children (Lin et al. 2008, Burnett et al. 2001); and,
- higher mortality, particularly in the elderly, women, and African Americans (Medina-Ramón and Schwartz 2008).

Even though ozone is not directly emitted from emission sources such as the gensets, precursor pollutants that create ozone, such as nitrogen oxides (NOx) and volatile organic compounds (VOCs), would be emitted. The NOx emissions of the gensets during readiness testing and maintenance would be required to be fully offset through the permitting process with the BAAQMD. See more detailed discussion in **Section 4.3 Air Quality**.

For CalEnviroScreen, the air monitoring data used in this indicator have been updated to reflect ozone measurements for the years 2017 to 2019. CalEnviroScreen 4.0 uses the mean of the daily maximum 8-hour ozone concentration (parts per million) for the summer months (May-October), averaged over three years (2017-2019). According to CalEnviroScreen data, census tracts are ordered by ozone concentration values, and then are assigned a percentile based on the statewide distribution of values.

Results for ozone are included in **Table 4.21-4**. Ozone levels in all the census tracts within six-mile radius of the project site are relatively low, with percentiles at or below 22. Another way to look at the data is that approximately 78 percent of all California census tracts have higher ozone levels than these census tracts near the project. For ozone, the census tracts within a six-mile radius of the proposed project's site are not exposed to high ozone concentrations compared to the rest of the state.

The project would not be expected to contribute significantly to regional air quality as it relates to ozone. The project would be required to comply with air quality emission rate significance thresholds for NOx and VOCs, which are precursor pollutants that create ozone during the construction and testing and maintenance phases. The project would use best management practices (BMPs) during construction, which would reduce NOx and VOCs. The project's impacts would not be expected to cause exceedance of AAQS during readiness testing and maintenance. NOx emissions resulting from readiness testing and maintenance would need to be fully offset to reduce net impacts to levels below the BAAQMD's CEQA threshold. VOC emissions would be below the BAAQMD's threshold of significance, and the applicant would not be required to offset them. Therefore, the project would not contribute significantly to regional ozone concentrations, relative to baseline conditions.

Staff concludes that the project would not expose sensitive receptors to substantial ozone precursor concentrations. The project's ozone and ozone precursor air quality impacts would be less than significant for the local EJ community and the general population. Additionally, as NOx emissions of the gensets would be fully offset, the project would not result in a cumulatively considerable net increase of secondary pollutants such as ozone in the air basin.

PM2.5 Impacts

PM is a complex mixture of aerosolized solid and liquid particles including such substances as organic chemicals, dust, allergens, and metals. These particles can come from many sources, including cars and trucks, industrial processes, wood burning, or other activities involving combustion. The composition of PM depends on the local and regional sources, time of year, location, and weather.

PM2.5 refers to particles that have a diameter less than or equal to 2.5 micrometers. PM2.5 is known to cause numerous health effects, which can potentially affect EJ communities. Particles in this size range can have adverse effects on the heart and lungs, including lung irritation, exacerbation of existing respiratory disease, and cardiovascular effects.

For CalEnviroScreen, the indicator PM2.5 is determined by the annual mean concentration of PM2.5 (weighted average of measured monitor concentrations and satellite observations, $\mu g/m^3$), averaged over three years (2015-2017). According to CalEnviroScreen data, census tracts are ordered by PM2.5 concentration values, and then are assigned a percentile based on the statewide distribution of values and are shown in **Table 4.21-4**. All the census tracts within the six-mile radius of the project site range from the lowest of 19.43 percentile for census tract 6085504602 to the highest of 41.56 percentile for census tract 6085503602 in the PM2.5 category (see **Table 4.21-4**). This indicates that the highest PM concentrations in census tract 6085503602 are higher than 41.56 percent of tracts statewide. This means that these communities are exposed to below average PM2.5 concentrations compared to the rest of the state.

The project would not be expected to contribute significantly to the regional air quality related to PM2.5. The project would not expose sensitive receptors to substantial pollutant concentrations of PM2.5 during construction or readiness testing and maintenance of the gensets. The project would use BMPs during construction, which would reduce PM emissions. The gensets would be equipped with diesel PM filters, which would reduce PM emissions from the engines. Therefore, the project would not contribute significantly to regional PM2.5 concentrations, relative to baseline conditions.

The project's PM2.5 air quality impacts would be less than significant for the local EJ community and the general population. Additionally, as NOx emissions of the gensets would be fully offset, the project would not result in cumulatively considerable net increase of secondary pollutants such as PM in the air basin.

Diesel Particulate Matter (Diesel PM)

This indicator represents how much diesel PM is emitted into the air within and near the census tract. The data are from 2016 California Air Resources Board's emission data from on-road vehicles (trucks, buses, and cars) and off-road sources (ships and trains, for example). This is the most recent data available with which to make the necessary comparisons.

Table 4.21-4 shows that among these census tracts, six are higher than the 90th percentile. They are 90.49, 91.5, 95.13, 95.3, 94.82 and 96.17 (in census tracts 06085504318, 06085503601, 06085501600, 06085503602, 06085501501, and 06085503110, respectively), meaning they are higher than 90.49, 91.5, 95.13, 95.3, 94.82 and 96.17 percent of the census tracts in California.

However, according to the results of the HRA conducted for this project in **Section 4.3 Air Quality**, impacts associated with diesel PM from the proposed project construction and operation activities (diesel-fueled equipment) would be less than significant and would not have a significant cumulative contribution to the diesel PM levels in the disadvantaged communities. Therefore, the project's diesel PM impacts would be less than significant for the local EJ community and the general population.

Pesticide Use

Specific pesticides included in the Pesticide Use category were narrowed from the list of all registered pesticides in use in California to focus on a subset of 132 selected active pesticide ingredients that are filtered for hazard and volatility for the years 2017-2019 collected by the California Department of Pesticide Regulation. Only pesticides used on agricultural commodities are included in the indicator.

Table 4.21-4 shows that the highest percentile in the project's six-mile radius is from census tract 6085504318, indicating that pesticide use in this census tract (6085504318) is only higher than 4.97 percent of tracts statewide. This also indicates that pesticide use in these census tracts are below the statewide average in terms of pesticide use and that these communities are not exposed to high pesticide concentrations as compared to the rest of the state. Therefore, the project's pesticide use would be less than significant for the local EJ community and the general population.

Toxic Releases from Facilities

This indicator represents modeled toxicity-weighted concentrations of chemical releases to air from facility emissions and off-site incineration in and near the census tract. The U.S. EPA provides public information on the amount of chemicals released into the environment from many facilities. This indicator uses toxicity-weighted concentrations of modeled chemical releases to air from facility emissions and off-site incineration. The data are from 2017-2019.

Table 4.21-4 shows that the highest percentile in the project's six-mile radius is from census tract 06085504318, indicating that toxic release from facilities threats in this

census tract (06085504318) is higher than 39.48 percent of tracts statewide. This also indicates that these communities are lower than the state average for exposure to toxic releases. This also indicates that these communities are not exposed to high toxic releases from facilities as compared to the rest of the state.

According to the results of the HRA conducted for the project in **Section 4.3 Air Quality**, impacts associated with toxic releases from construction and operation activities (diesel-fueled equipment) would be less than significant. The project would not have a significant cumulative contribution to toxic releases. Therefore, the project's toxics emissions would be less than significant for the local EJ community and the general population.

Traffic Density

This indicator represents the sum of traffic volumes adjusted by road segment length. It is calculated as sum of traffic volumes adjusted by road segment length (vehicle-kilometers per hour) divided by total road length (kilometers) within 150 meters of the census tract. The data are from 2017.

Table 4.21-4 shows that among these census tracts, eight are higher than the 90th percentile. The highest percentiles are 99.54 and 98.7 (in census tracts 06085503110 and 06085501501, respectively), meaning these two are higher than 99.54 and 98.7 percent of the census tracts in California. Traffic impacts is related to the diesel PM emitted from diesel-fueled vehicles.

The proposed project would generate vehicle trips to the site. These trips include workers, material, and equipment deliveries. As discussed in **Section 4.17 Transportation**, the project impact to traffic would be less than significant with the implementation of **TRANS-1** to reduce project generated VMT to a level below the applicable VMT threshold. In addition, according to the results of the HRA conducted for the project in **Section 4.3 Air Quality**, impacts associated with diesel PM from the proposed project construction and operation activities (diesel-fueled equipment) would be less than significant and would not have a significant cumulative contribution to the diesel PM-related traffic density in the disadvantaged communities. Therefore, the project's traffic volume impact would not have a significant cumulative contribution to the traffic density for the local EJ community and the general population.

Asthma

This indicator is a representation of an asthma rate. It measures the number of emergency department (ED) visits for asthma per 10,000 people over the years 2015 to 2017. The information was collected by the California Office of Statewide Health Planning and Development.

Table 4.21-5 shows that none of these census tracts are higher than the 90th percentile in the Asthma category. The highest percentile is from census tract 6085503712 (88.43 percent). This indicates the number of ED visits for asthma per 10,000 people over the years 2015 to 2017 are higher than 88.43 percent of tracts statewide. Census tract

06085503602 was slightly lower, at the 88.33 percentile. This indicates that these two communities have the above average numbers of ED visits due to asthma compared to the rest of the state.

According to the results of the HRA conducted for the project in **Section 4.3 Air Quality**, impacts associated with emissions from construction and operation activities (diesel-fueled equipment) would be less than significant and would not have a significant cumulative contribution to asthma ED visits. Therefore, the project's emissions would not have a significant cumulative contribution to asthma ED visits for the local EJ community and the general population.

Low Birth Weight Infants

This indicator measures the percentage of babies born weighing less than 2,500 grams (about 5.5 pounds) out of the total number of live births over the years 2009 to 2015. The information was collected by the California Department of Public Health.

Table 4.21-5 shows that among these census tracts, three of them are higher than the 90th percentile. They are 98.85, 91.34 and 93.65 (in census tracts 06085504602, 06085501600, and 06085503712, respectively), meaning they are higher than 98.85, 91.34 and 93.65 percent of the census tracts in California. This indicates that these three communities are higher than the state average of low birth weight infants.

The HRA for the project in **Section 4.3 Air Quality** was based on a highly conservative health-protective methodology that accounts for impacts on the most sensitive individuals in a given population. According to the results of the assessment, the risks at the sensitive receptors would be below health-based thresholds. Therefore, the toxic emissions from the project would not cause significant health effects for the low birth weight infants in these disadvantaged communities or have a significant cumulative contribution to these disadvantaged communities. The project's emissions would not have a significant cumulative contribution to low birth weight infant births for the local EJ community and the general population.

Cardiovascular Disease

This indicator represents the rate of heart attacks. It measures the number of emergency department visits for acute myocardial infarction (or heart attack) per 10,000 people over the years 2015 to 2017.

Table 4.21-5 shows that none of these census tracts are higher than the 90th percentile in the Cardiovascular Disease category. The highest percentile is from census tract 6085503712. It indicates the number of emergency department visits for acute myocardial infarction per 10,000 people over the years 2015 to 2017 is higher than 71.62 percent of tracts statewide. This also indicates that this community is above the average number of emergency department visits for acute myocardial infarction compared to the rest of the state.

According to the results of the HRA conducted for the project in **Section 4.3 Air Quality**, impacts associated with emissions from construction and operation activities (diesel-fueled equipment) would be less than significant and would not have a significant cumulative contribution to cardiovascular disease. The project's emissions would not have a significant cumulative contribution to cardiovascular disease for the local EJ community and the general population.

Cultural and Tribal Cultural Resources

No Impact. Staff considered EJ populations in its analysis of the project. Staff did not identify any Native American EJ populations that either reside within six miles of the project or that rely on any subsistence resources that could be impacted by the proposed project.

Hazards and Hazardous Materials

Less Than Significant Impact. EJ populations may experience disproportionate hazards and hazardous materials impacts if the storage and use of hazardous materials within or near EJ communities occur to a greater extent than within the community at large. A disproportionate impact upon the EJ population resulting from the planned storage and use of hazardous materials on the site is extremely low. Diesel fuel to run the emergency generators is the hazardous material that the project site would have in greatest quantity. The total quantity would be divided up and stored in many separate double-walled fuel tanks (one for each generator) with proper spill controls. Therefore, the likelihood of a spill of sufficient quantity to impact the surrounding community and EJ population would be very unlikely, thus the impact on the EJ community would be less than significant.

Hydrology and Water Quality

Less Than Significant Impact. A disproportionate hydrologic or water quality impact on an EJ population could occur if the project would contribute to impairment of drinking water, exacerbate groundwater contamination threats, or contribute pollutants to impaired water bodies.

Since the overall CalEnviroScreen score reflects the collective impacts of multiple pollutants and factors, staff examined the individual contributions to categories as they relate to hydrology and water quality. The pollutants of concern in this analysis are those from construction and operational activities. The CalEnviroScreen scores for the disadvantaged community census tracts in a six-mile radius of the project (see **Figure 4.21-1**) are presented in **Table 4.21-4** for each of the following environmental stressors that relate to hydrology and water quality: Drinking Water Contaminants, Groundwater Threat, and Impaired Water Bodies. The percentile for each disadvantaged census tract reflects its relative ranking among all of California's census tracts. A disproportionate hydrology or water quality impact on an EJ population could occur if a project introduces an additional pollutant burden to a disadvantaged community.

CalEnviroScreen assigns a score to each type of stressor. To assess the impact of a stressor on population within a census tract, the score is assigned a weighting factor that decreases with distance from the census tract. For stationary stressors related to hydrology or water quality, the weighting factor diminishes to zero for distances larger than 1,000 meters (0.6 mile). As **Figure 4.21-1** shows, all but one of the assessed census tracts are more than 1,000 meters away from the project. The census tract that is within 1,000 meters of the proposed project site is tract 6085504318. Therefore, this analysis focuses on that census tract.

Drinking Water Contaminants

Low income and rural communities, particularly those served by small community water systems, can be disproportionately exposed to contaminants in their drinking water. CalEnviroScreen aggregates drinking water quality data from the California Department of Public Health, the U.S. EPA, and the California State Water Resources Control Board (SWRCB). The score provided by the Drinking Water Contaminant metric calculation is intended to rank water supplies relative to their history or likelihood to provide water that exceeds drinking water standards.

Census tract 6085504318 scored 23 percent in the Drinking Water Contaminants category (see **Table 4.21-4**). This indicates the drinking water contamination threat in this census tract is low, and that the community does not have a significant level of exposure to contaminants through drinking water.

The project would not be expected to contribute significantly to drinking water source degradation. The project would be required to comply with the Clean Water Act (CWA) and California's Porter-Cologne Water Quality Control Act by controlling the discharge of pollutants during its construction and operation phases. The project would implement modern operational phase storm water and containment controls that would improve upon the site's potential to release contaminants to the environment. The project's hydrology and water quality impacts would be reduced to less than significant for the census tract of concern and the general population.

Groundwater Threats

Common groundwater pollutants found at contaminant release sites in California include gasoline and diesel fuels, chlorinated solvents and other volatile organic compounds such as benzene, toluene, and methyl tert-butyl ether; heavy metals such as lead, chromium and arsenic; polycyclic aromatic hydrocarbons; persistent organic pollutants like polychlorinated biphenyls; Dichlorodiphenyl-trichloroethane and other insecticides; and perchlorate. CalEnviroScreen aggregates data from the SWRCB's GeoTracker website about groundwater threats. The score provided by the Groundwater Threat metric calculation is intended to rank the relative risk of environmental impact by groundwater contamination, within each census tract.

Census tract 6085504318 scored 97 percent in the Groundwater Threat category (see **Table 4.21-4**). This indicates that the community is located alongside a high proportion of groundwater threats and is within the top 10 percent of tracts statewide.

The project would not be expected to contribute significantly to groundwater degradation, relative to existing conditions. The project would be required to comply with the CWA by controlling the discharge of pollutants during its construction and operation phases. The project would implement modern operational phase storm water and containment controls that would improve upon the site's potential to release contaminants to groundwater. The project would therefore not be expected to degrade groundwater quality any further than baseline conditions. The project's hydrology and water quality impacts would be reduced to less than significant for the census tract of concern and the general population.

Impaired Water Bodies

Rivers, lakes, estuaries, and marine waters in California are important for many different uses. Water bodies used for recreation may also be important to the quality of life of nearby residents if subsistence fishing is critical to their livelihood. Water bodies also support abundant flora and fauna. Changes in aquatic environments can affect biological diversity and overall health of ecosystems. Aquatic species important to local economies may be impaired if the habitats where they seek food and reproduce are changed. Additionally, communities of color, low-income communities, and tribes generally depend on the fish, aquatic plants, and wildlife provided by nearby surface waters to a greater extent than the general population. CalEnviroScreen aggregates data from the SWRCB's Final 2012 California Integrated Report (CWA Section 303(d) List / 305(b) Report). The score provided by the Impaired Water Bodies metric calculation is intended to rank the relative risk of impaired water bodies, within each census tract.

Census tract 6085504318 scored 33 percent in the Impaired Water Bodies category (see **Table 4.21-4**). This indicates that impaired water bodies in the subject census tract are below the statewide average in terms of relative abundance and that the community is not expected to contain a high abundance of impaired water bodies.

The project would not be expected to contribute significantly to the impairment of local or regional water bodies. The project would be required to comply with the CWA by controlling the discharge of pollutants during its construction and operation phases. Also, the project would implement modern operational phase storm water and containment controls that would improve upon the site's potential to release contaminants to the environment. The project would therefore be expected to provide a long-term benefit to local and regional water bodies, relative to baseline conditions. The project's hydrology and water quality impacts would be reduced to less than significant for the census tract of concern and the general population.

Land Use and Planning

Less Than Significant Impact. A significant land use impact could occur if a project would divide a community or conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The project would be developed on two adjacent parcels that have already been developed and that do not serve as connections between areas of a community; thus, the project would not divide a community. With the project's proposed rezone from Industrial Park to Transit Employment Center – Planned Development, the project would be consistent with the *Envision San José 2040 General Plan* and the City of San José Zoning Code, and would not conflict with land use plans or policies in such a way as to cause significant impacts. (See **Section 4.11 Land Use and Planning** for details.) Also, the proposed project would not involve uses that could cause unmitigated hazardous or nuisance impacts. (See **Sections 4.3 Air Quality**, **4.9 Hazards and Hazardous Materials**, **4.13 Noise**, and **4.17 Transportation,** which evaluate the project's potential impacts relating to nuisance effects and hazards.) Therefore, land use impacts would be less than significant, including potential disproportionate impacts on an EJ population.

Noise

Less Than Significant with Mitigation Incorporated. EJ populations may experience disproportionate noise impacts if the siting of unmitigated industrial facilities occurs within or near EJ communities to a greater extent than within the community at large. The project site is within an area having an EJ population. The area surrounding the site is primarily industrial and commercial uses and the nearest residences are approximately 200 feet away from the project site.

Construction activities could elevate the existing ambient noise levels at the nearest residences by up to 11 dBA and could be perceived as noisy. The loudest construction work could elevate the existing ambient noise levels at nearby commercial and office buildings by up to about 9 dBA. The implementation of mitigation measure **NOI-1**, requiring a noise complaint and redress process, would ensure construction noise impacts as perceived by the community would be less than significant. **NOI-1** would also include several appropriate measures to reduce and control construction-related noise, limit construction work to daytime hours, and require notifying project site neighbors of the construction schedule.

Since the project is near a residential land use, noise reduction measures, such as mechanical equipment enclosures and parapet walls, would be required (incorporated in the operational noise modeling). Thus, the operational noise levels would comply with the city's noise limits and would not elevate the existing ambient noise levels at the nearest residences.

Thus, the project's construction and operational noise impacts would be less than significant for all the area's population, including the EJ population.

Population and Housing

Less Than Significant Impact. The study area used to analyze the population influx and housing supply impacts includes Fremont, Milpitas, San José, Santa Clara, Sunnyvale, and Santa Clara County. The CEC staff considered the project's population and housing impacts on the EJ population living in these geographic areas.

The potential for population and housing impacts is predominantly driven by the temporary influx of non-local construction workers seeking lodging closer to a project site. For the project, the construction workers would be drawn from Bay Area and thus would not likely seek temporary lodging closer to the project site. The operations workers are also anticipated to be drawn from the Bay Area and would not likely seek housing closer to the project site. If some operations workers were to relocate closer to the project site, there would be sufficient housing in the project area.

A population and housing impact could disproportionately affect an EJ population if the project were to displace minority or low income residents from where they live, causing them to find housing elsewhere. If this occurs, an EJ population may have a more difficult time finding replacement housing due to racial biases and possible financial constraints. As the project would not displace any residents or remove any housing, there would be no disproportionate impact to EJ populations from this project.

Transportation

Less Than Significant Impact. Reductions in transportation options may significantly impact EJ populations. In particular, an impact to bus transit, pedestrian facilities, or bicycle facilities could cause disproportionate impacts to low-income communities, as low-income residents more often use these modes of transportation. However, as concluded in **Section 4.17 Transportation**, temporary construction activities associated with the project's interconnection to utility services and pedestrian and bicycle improvments at the Trade Zone Boulevard and Ringwood Avenue intersection would not interfere with alternative transportation, including pedestrian, bicycle or transit routes. Typical activities related to the construction of any development could include lane narrowing and lane closures. In the event of any type of closure clear signage (closure and detour signs) would be provided to ensure vehicles, pedestrians, and bicyclists are able to adequately reach their intended destinations safely. Impacts would be less than significant, and therefore would cause less than significant impacts to EJ populations. Likewise, transportation impacts would not be disproportionate.

Utilities and System Services

Less Than Significant Impact. A disproportionate utilities and system services impact on an EJ population could occur if the project would contribute to or exacerbate the effects of cleanup sites, hazardous waste generators and facilities, and solid waste facilities. Since the overall CalEnviroScreen score reflects the collective impacts of multiple pollutants and factors, staff examined the individual contributions to indicators as they relate to wastes addressed under utilities and system services. The wastes of concern in

this analysis are those from construction and operational activities. The handling and disposal of each type of waste depends on the hazardous ranking of its constituent materials. Existing laws, ordinances, regulations, and standards ensure the desired handling and disposal of waste materials without potential public or environmental health impacts. The CalEnviroScreen scores for the disadvantaged community census tracts in a six-mile radius of the project (see **Figure 4.21-1**) are presented in **Table 4.21-4** for each of the following environmental stressors that relate to waste management: cleanup sites, hazardous waste generators and facilities, and solid waste facilities. The percentile for each disadvantaged census tract reflects its relative ranking among all of California's census tracts. A disproportionate waste management impact on an EJ population could occur if project wastes impacted the disadvantaged community.

CalEnviroScreen assigns a score to each category of stressors. To assess the impact of a stressor on population within a census tract, the score is assigned a weighting factor that decreases with distance from the census tract. For stationery stressors, the weighting factor diminishes to zero for distances larger than 1,000 meters (0.6 mile). As **Figure 4.21-1** shows, all but one of the assessed census tracts are more than 1,000 meters away from the project. The census tract that is within 1,000 meters of the proposed project site is tract 6085504318. Therefore, this analysis focuses on that census tract.

Cleanup Sites

This indicator is calculated by considering the number of cleanup sites including Superfund sites on the National Priorities List, the weight of each site, and the distance to the census tract. Sites undergoing cleanup actions by governmental authorities, or by property owners, have suffered environmental degradation due to presence of hazardous substances. Of primary concern is the potential for people to come in contact with these substances.

Census tract 6085504318 scored 99.74 percent in the Cleanup Sites category (see **Table 4.21-4**). The interpretation is that contamination threats due to the presence of cleanup sites in these census tracts are among the highest of all tracts statewide. This is an indication that the communities within that tract are located alongside a high relative proportion of cleanup sites.

If there is any existing contamination at the project site, it would be remediated by the current owner in accordance with regulatory requirements that would ensure there would be no impacts to on- or off-site receptors. In addition, the project owner would have to comply with appropriate laws, ordinances, regulations, and standards that would require additional cleanup of contaminated soils and groundwater that might be encountered during construction and operation activities. Therefore, the project would not be expected to contribute significantly to effects from cleanup sites for the relevant census tract and for the general population.

Hazardous Waste Generators and Facilities

This indicator is calculated by considering the number of permitted treatment, storage and disposal facilities or generators of hazardous waste, the weighting factor of each generator or site, and the distance to the census tract. Hazardous waste must be transported by the hazardous waste generators to a permitted treatment, storage, and disposal facilities by registered hazardous waste transporters. Shipments must be accompanied by a hazardous waste manifest. There are widespread concerns for both human health and the environment from sites that serve for the processing and disposal of hazardous waste. Newer facilities are designed to prevent the contamination of air, water, and soil with hazardous material. However, even newer facilities may negatively affect perceptions of surrounding areas in ways that have economic, social, and health impacts.

Census tract 6085504318 scored 99.85 percent in the Hazardous Waste Generators and Facilities category (see **Table 4.21-4**). The interpretation is that threats related to hazardous waste generation and facilities in this census tract are among the worst of all tracts statewide, meaning that the communities in that tract are located alongside sites with a high relative proportion of hazardous waste generators and facilities.

The project would not be expected to contribute significantly to hazardous waste generation or to the number or size of facilities handling hazardous waste processing. Further, the project would be required to comply with appropriate laws, ordinances, regulations, and standards to control storage and disposal of hazardous waste during its construction and operation phases. The project would implement modern operational phase controls to prevent or reduce the generation of hazardous wastes and to dispose of them in a manner that would minimize impacts to the environment both during project construction and operation. The project's impacts related to hazardous waste generation and disposal would be reduced to less than significant for the relevant census tract and the general population.

Solid Waste Facilities

This indicator is calculated by considering the number of solid waste facilities including illegal sites, the weighting factor of each, and the distance to a census tract. Newer solid waste landfills are designed to prevent the contamination of air, water, and soil with hazardous materials. However, older sites that are out of compliance with current standards or illegal solid waste sites may degrade environmental conditions in the surrounding area and pose a risk of exposure. Other types of facilities, such as composting, treatment, and recycling facilities may raise concerns about odors, vermin, and increased traffic.

Census tract 6085504318 scored in the 99.77 percentile in the Solid Waste Facilities category (see **Table 4.21-4**). The interpretation is that the number and type of facilities within or nearby this census tract and the environmental deterioration due to their presence are among the highest of all tracts statewide.

Solid waste generated during construction and operation of the project would be segregated, where practical, for recycling, and disposed where there is adequate capacity for disposal of nonhazardous waste. Also, the project would be required to develop and implement plans that would ensure proper disposal of nonhazardous waste at appropriately licensed facilities. The project owner would use solid waste sites or facilities that are verified to be in compliance with current laws, ordinances, regulations, and standards. In addition, there would be no increase of solid waste generators and facilities in the area due to project construction or operation because there is adequate space for disposal of waste from the project. Therefore, there would be no impact due to solid waste facilities that would disproportionately impact an EJ community in the relevant census tract.

List of Preparers and Contributors

The following are a list of preparers and contributors to **Section 4.21 Environmental Justice**:

Ellen LeFevre	General Environmental Justice information, CalEnviroScreen information, Environmental Justice screening, public outreach, CalEnviroScreen project screening, and Population and Housing impact analysis
Mark Hamblin	Aesthetics impact analysis
Wenjun Qian	Air Quality (public health) impact analysis
Gabriel Roark, Lauren DeOliveira, Roger Hatheway	Cultural and Tribal Cultural Resources impact analysis
Brett Fooks, Aurie Patterson	Hazards and Hazardous Materials impact analysis
James Ackerman	Hydrology and Water Quality, Utilities and Service Systems impact analyses
Ken Salyphone	Noise impact analysis
Andrea Koch	Land Use and Planning impact analysis
Ashley Guiterrez	Transportation impact analysis

4.21.3 Mitigtion Measures

AQ-1 and **NOI-1** are required. See **Section 4.3 Air Quality** and **Section 4.13 Noise** for the mitigation language.

4.21.4 References

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Section 5

Alternatives

5 Alternatives

5.1 Introduction

This section evaluates alternatives to the STACK Trade Zone Boulevard Technology Park (STACK Trade Zone Park), or proposed project. The STACK Trade Zone Park includes the SVY Data Center/Backup Generating Facility (SVYDC/SVYBGF), an advanced manufacturing building (AMB) for light industrial and ancillary support uses, a parking garage, and related utility infrastructure. Under the proposed project, the emergency backup generators, or gensets, would use renewable diesel as the primary fuel with ultra-low sulfur (conventional) diesel as the secondary fuel (DayZenLLC 2022n).

Alternatives initially considered and not evaluated further, primarily due to reliability issues, include biodiesel as an alternative fuel, two fuel cell technologies, two standalone battery energy storage systems (lithium-ion and flow batteries), and a tandem battery storage system. Staff initially considered an alternative that would omit the AMB from the project before concluding that such a change would not meet city of San José (City) expectations that the AMB remain a key, employment-focused use of the site.

In addition to the No Project/No Build Alternative (Alternative 1), staff carried forward the Natural Gas Internal Combustion Engine Alternative (Alternative 2) for analysis and comparison to the proposed project.

5.2 CEQA Requirements

The California Environmental Quality Act (CEQA) Guidelines require that an Environmental Impact Report (EIR) consider and discuss alternatives to the proposed project (Cal. Code Regs., tit. 14, § 15000 et seq.). Section 15126.6 of the CEQA Guidelines provides that the alternatives analysis must:

- describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project;
- evaluate the comparative merits of the alternatives;
- focus on alternatives that would avoid or substantially lessen any significant effects of the project, even if these alternatives would impede to some degree attainment of the project objectives, or would be more costly; and
- describe the rationale for selecting alternatives to be discussed and identify alternatives that were initially considered but then rejected from further evaluation.

CEQA requires that an EIR "consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation" (Cal. Code Regs., tit. 14, § 15126.6, subd. (a)). Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are failure to meet most of the basic project objectives, infeasibility, or inability to avoid significant environmental impacts (Cal. Code Regs., tit. 14, § 15126.6, subd. (c)). The range of potentially feasible alternatives

selected for analysis is governed by a "rule of reason," requiring evaluation of only those alternatives "necessary to permit a reasoned choice" (Cal. Code Regs., tit. 14, § 15126.6, subd. (f)).

An EIR is not required to consider alternatives that are infeasible (Cal. Code Regs., tit. 14, § 15126.6, subd. (a)). In addressing feasibility of alternatives, factors that may be taken into account are site suitability; economic viability; availability of infrastructure; general plan consistency; other plans or regulatory limitations; jurisdictional boundaries; and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (Cal. Code Regs., tit. 14, § 15126.6, subd. (f)(1)). An EIR "need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative" (Cal. Code Regs., tit. 14, § 15126.6, subd. (f)(3)).

The lead agency is also required to evaluate the "no project" alternative along with its impact. Analyzing a no project alternative allows decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project (Cal. Code Regs., tit. 14, § 15126.6, subd. (e)(1)). "The 'no project' analysis shall discuss the existing conditions at the time the notice of preparation is published…as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives" (Cal. Code Regs., tit. 14, § 15126.6, subd. (e)(2)).

5.3 Project Objectives and Alternatives Screening

The ideal process to select alternatives to include in the analysis begins with the establishment of project objectives. Section 15124 of the CEQA Guidelines addresses the requirement for an EIR to contain a statement of objectives, as follows:

A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project and may discuss the project benefits.

The applicant's purpose for the SVYDC is to provide customers with mission critical space to support its servers, including space conditioning and a steady stream of high-quality power supply (DayZenLLC 2021a). The applicant's key objectives are to incorporate the most reliable and flexible form of backup electric generating technology into the SVYBGF considering commercial availability and feasibility, technical feasibility, and reliability.

The applicant's project objectives are as follows:

- Develop a state-of-the-art data center large enough to meet projected growth.

- Locate the data center near technology infrastructure and near existing STACK data centers to minimize latency and optimize for customer regional economies of scale.
- Develop an Advanced Manufacturing Building (AMB) that facilitates the growth of the advanced manufacturing sector in North San José and continues a presence of advanced manufacturing activities in this market.
- Develop the data center and AMB as a mixed-use campus on land with zoning consistent with these uses and at a location acceptable to the city of San José.
- Develop a data center that can be constructed in phases, which can be timed to match projected growth.
- Incorporate the most reliable and flexible form of backup electric generating technology into the SVY Backup Generating Facility (SVYBGF) considering the following evaluation criteria:
    - Reliability. The selected backup electric generation technology must be extremely reliable in the case of an emergency loss of electricity from the utility.
        - The SVYBGF must provide a higher reliability than 99.999 percent in order for the SVY Data Center (SVYDC) to achieve an overall reliability of equal to or greater than 99.999 percent reliability.
        - The SVYBGF must provide reliability to the greatest extent feasible during natural disasters, including earthquakes.
        - The selected backup electric generation technology must have a proven built-in resilience so if any of the backup unit fails due to external or internal failure, the system will have redundancy to continue to operate without interruption with no single point of failure.
        - The selected backup electric generation technology must include engineering methods, procedures, and equipment that have been achieved in practice.
        - The SVYDC must have onsite means to sustain power for 24-hours minimum in failure mode, inclusive of utility outage.
    - Commercial Availability and Feasibility. The selected backup electric generation technology must currently be in use and proven as an accepted industry standard for technology sufficient to receive commercial guarantees in a form and amount acceptable to financing entities. It must be operational within a reasonable timeframe where permits and approvals are required and with a supply of fuel that is within service level agreement thresholds to sustain customers and server uptime.
    - Technical Feasibility. The selected backup electric generation technology must use systems that are compatible with one another and be maintainable in a reasonable fashion achieving timely switch outs, repairs, and maintenance. Warranty and support must be within practical means to achieve optimum uptime during failures within the utility power supply. The back up solution must also achieve industry

standard start times in the event of an outage to avoid interruption of power to the equipment within the data center.

5.4 Reliability and Risk Factors

The most important data center criterion is reliability. Crucial services such as the 911, state offices of emergency management, and utilities infrastructure are increasingly using data centers for their operation. The selected backup electric generation technology must be extremely reliable in the case of an emergency loss of electricity from the utility. Data center customers demand the most reliable data storage service available, and data center insurers are willing to invest only in proven technologies with extremely low probability of operational failure.

Any alternative backup generation technology would be measured against proven available technologies such as that proposed for the SVYBGF. Should the reliability of an alternative technology not match that of the proposed technology, it would not be considered a viable alternative.

Risk factors that affect the reliable operation of backup generators include the following: failure to start, failure to run due to various technical issues, and failure to run due to lack of fuel supply (NREL 2019). Any alternative technology must have proven operational hours, a reliable source of fuel supply, and redundancy capabilities. Sufficiently mitigating these risks would ensure that data center operation is not interrupted during a power utility failure.

The analyses in subsections "5.6 Alternatives Considered and Not Evaluated Further" and "5.7 Alternatives Selected for Analysis and Comparison to the Proposed Project" below, assess the reliability issues of the fuel and technology alternatives.

5.5 Environmental Impacts of the Proposed Project

This EIR evaluates the potential environmental impacts of the proposed project. Staff recommends mitigation measures to reduce all potentially significant impacts to less-than-significant levels. No significant and unavoidable environmental impacts have been identified. Staff's recommended mitigation measures are summarized as follows:

- **Air Quality** – Recommended mitigation measure **AQ-1** would reduce air quality impacts during project construction. This measure requires the incorporation of the local air district's best management practices to control fugitive dust. This measure also incorporates exhaust control measures to reduce emissions from construction equipment. During readiness testing and maintenance, the oxides of nitrogen (NOx [as an ozone precursor]) emissions of the standby generators would be fully offset through the permitting process with the Bay Area Air Quality Management District (BAAQMD). With the implementation of **AQ-1** during construction and NOx offsets for readiness testing and maintenance through the local air district's permitting requirements, the project would not cause a cumulatively considerable net increase

of any criteria air pollutant, and impacts would be reduced to less than significant with mitigation incorporated.

- **Biological Resources** – The proposed project is near important wildlife preserves, so flyover and transient special status bird species are possible onsite. Thus, it is important that a worker environmental awareness program (WEAP) is developed, and onsite construction personnel are trained to recognize and avoid biological resources. The WEAP, recommended mitigation measure **BIO-1**, will help ensure that impacts on all biological resources are reduced to less than significant.

  Staff referenced the Santa Clara Valley Habitat Plan (SCVHP) condition 15 for burrowing owl, and the California Department of Fish and Wildlife (CDFW) *Staff Report on Burrowing Owl Mitigation* to recommend several mitigation measures presented in Parts A–C of mitigation measure **BIO-2** to prevent and reduce impacts on burrowing owls to less-than-significant levels. Pre-construction surveys, pursuant to Part A, would reduce the impacts on burrowing owl during the construction phase. Part B and Part C would protect and lessen impacts on burrowing owl by describing the process of establishing buffer zones during the breeding and non-breeding season, monitoring, discouraging re-colonization, and passive relocation. The implementation of **BIO-2** would ensure that any impacts on burrowing owl are avoided and rendered less than significant.

  Recommended mitigation measure **BIO-3** would ensure that potential construction impacts on protected bird and raptor species would be reduced to less than significant. **BIO-3** includes requirements to conduct tree removal outside the nesting period if possible, to conduct nesting bird surveys prior to the initiation of any construction activities during the nesting period, to establish buffers to avoid the disturbance of nesting birds if active nests are detected, and to conduct monitoring of active bird nests.

  Recommended mitigation measure **BIO-4** would outline reporting requirements and process. It would establish the Avian Protection Plan that would consist of a compilation of the nest survey report(s) and a summary of the avian best practices in mitigation measures **BIO-2** and **BIO-3**.

  To be consistent with the SCVHP, the project owner would be required to pay a nitrogen deposition fee, in-lieu of providing compensatory mitigation, for projects that result in atmospheric nitrogen emissions. **BIO-5** would require the one-time payment of a nitrogen deposition fee, which would reduce impacts from non-point sources (i.e., vehicles) to below the level of significance (exact fees to be updated annually by the Santa Clara Valley Habitat Agency and paid by the project owner).

  Combined, recommended mitigation measures **BIO-1** through **BIO-5** would make sure impacts on biological resources would be reduced to less-than-significant levels.

- **Cultural and Tribal Cultural Resources** – Recommended mitigation measure **CUL-1** requires qualified specialists and Native American monitors to prepare a workforce environmental awareness program, or WEAP, to instruct construction workers of the obligation to protect and preserve buried archaeological and Native

American resources that could be encountered during construction. It includes instructions regarding the need to halt work in the vicinity of potential archaeological and Native American resources that could be encountered. Mitigation measure **CUL-2** requires specific protocols for the event that prehistoric or historic resources are encountered during excavation or grading of the site. Mitigation Measure **CUL-3** specifies procedures for the event that human remains are discovered. Combined, mitigation measures **CUL-1**, **CUL-2**, and **CUL-3** would reduce potential impacts on buried historical resources to a less-than-significant level.

- **Geology and Soils** – With the implementation of mitigation measure **GEO-1**, potential impacts on paleontological resources from ground disturbing activities would be reduced to a less-than-significant level. **GEO-1** includes protocols for worker training to identify potential fossil finds, notification of a qualified paleontologist to assess any finds, and if the resource is considered to be significant, development by the paleontologist of a plan for preservation and mitigation.
- **Greenhouse Gas Emissions** – The proposed project would have a less-than-significant impact on greenhouse gas (GHG) emissions with the implementation of mitigation measures **GHG-1** and **GHG-2**. **GHG-1** would require the applicant to use renewable diesel for 100 percent of total energy use by the emergency backup generators, and only use ultra-low sulfur diesel as a secondary fuel in the event of supply challenges or a disruption in obtaining renewable diesel. **GHG-2** would require the applicant to participate in the San José Clean Energy (SJCE) program at the Total Green level (i.e., 100 percent carbon-free electricity) for electricity accounts associated with the project, or enter into an electricity contract with SJCE, or participate in a clean energy program that accomplishes the same goals of 100 percent carbon-free electricity as the SJCE Total Green Level, to ensure compliance with the City's 2030 Greenhouse Gas Emissions Reduction Strategy. The implementation of **GHG-1** and **GHG-2** would ensure the project complies with the BAAQMD CEQA GHG threshold, the City's 2030 Greenhouse Gas Emissions Reduction Strategy, and other applicable regulatory programs and policies. Accordingly, staff concludes that with the implementation of **GHG-1** and **GHG-2**, the project's GHG emissions would not have a significant direct or indirect impact on the environment.
- **Hazards and Hazardous Materials** – With the implementation of mitigation measures **HAZ-1** and **HAZ-2**, construction of the project would result in less-than-significant impacts on the public and the environment from hazards and hazardous materials. **HAZ-1** would require the preparation of a Site Management Plan (SMP), which would establish procedures for handling any contaminated groundwater or soil found during construction to minimize health risks. Records would be maintained for documenting compliance with the storage and handling of hazardous materials, and personnel would be required to follow health and safety procedures in the event of a release of hazardous materials. **HAZ-2** would require contractors at the project site to develop a Health and Safety Plan describing known environmental conditions for the site, provisions for personal protective equipment and procedures, and emergency contact protocols.

With the implementation of **HAZ-1** and **HAZ-2**, construction of the project would create a less-than-significant impact on the public or the environment.

- **Noise** – The loudest construction activities could elevate the existing ambient noise levels at the nearest residences by up to 11 dBA and could be perceived as noisy. The loudest construction work could elevate the existing ambient noise levels at nearby commercial and office buildings by up to about 9 dBA. The implementation of mitigation measure **NOI-1**, requiring a noise complaint and redress process, would ensure construction noise impacts as perceived by the community would be less than significant. **NOI-1** would also include several appropriate measures to reduce and control construction-related noise, limit construction work to daytime hours and require notifying project site neighbors of the construction schedule.

  Since the project is near a residential land use, noise reduction measures, such as mechanical equipment enclosures and paraphet walls, would be required (incorporated in the operational noise modeling). Thus, the operational noise levels would comply with the City's noise limits and would not elevate the existing ambient noise levels at the nearest residences.

  With implementation of **NOI-1**, the project's construction noise impacts would be reduced to less than significant. Operational noise impacts would be less than significant.

- **Transportation** – The operation of the project would generate vehicle miles travelled (VMT) that would exceed the City's thresholds. Mitigation measure **TRANS-1** would require the implementation of a Transportation Demand Management (TDM) plan requiring a suite of measures to reduce the project VMT to a level below the City's threshold. Implementation of **TRANS-1** would ensure that VMT generated by the project would be less than significant.

5.6 Alternatives Considered and Not Evaluated Further

CEQA provides that the range of alternatives to the proposed project, or to the location of the project, must include those that would feasibly attain most of the basic project objectives but would avoid or substantially lessen any of the project's significant effects. CEQA defines feasible as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors" (Cal. Code Regs., tit. 14, §§ 15126.6, subd. (c), and 15364).

Some of the alternatives initially considered by staff for this analysis were eliminated from detailed consideration due to potential feasibility issues, failure to reduce any significant environmental impacts, or failure to meet most of the project objectives. The subsections that follow discuss why certain fuel and technology alternatives could not achieve the level of reliability required to ensure an uninterrupted power supply. (The discussion above in subsection, "5.4 Reliability and Risk Factors," describes reliability and risk factors pertaining to data centers in general.)

Staff considered whether an alternative that would omit the advanced manufacturing building (AMB) from the project would substantially reduce the VMT score such that the impact on transportation would be less than significant. (See **Section 4.17 Transportation** for an analysis of the proposed project's impacts relating to VMT.) Staff also evaluated the reasons why no alternative project location is evaluated in this EIR.

The following discussions provide staff's reasons for eliminating these alternatives from further analysis and comparison to the proposed project.

5.6.1 Biodiesel Fuel Alternative

Staff initially considered but ultimately did not evaluate in detail biodiesel fuel technology. Biodiesel, or Fatty Acid Methyl Ester (FAME), is a domestically produced renewable fuel. Like renewable diesel, biodiesel can be manufactured from a variety of biomasses, such as vegetable oils, animal fats, and grease. However, biodiesel is not the same as renewable diesel. Biodiesel has different fuel properties than renewable diesel and must meet certain specifications given by the American Society for Testing and Materials (ASTM) D6751. Also, it is produced through transesterification, which is a chemical process that converts fats and oils into fatty acid methyl esters (U.S. EIA 2022). Biodiesel is generally blended with conventional diesel at a 5 percent to 20 percent ratio (Government Fleet 2016). Its physical properties are similar to those of conventional diesel fuel but is cleaner burning than conventional diesel. Biodiesel is compatible as an alternative fuel for diesel-fired emergency backup generators (gensets).

5.6.1.1 Potential Feasibility Issues

Biodiesel fuel currently suffers from technical problems, making it an unsuitable substitution for the renewable diesel fuel proposed for the SVY Backup Generating Facility (SVYBGF). Biodiesel fuel can be problematic for the genset's fuel system. It is harmful to rubber material, such as the hoses that transfer fuel and the associated O-rings and seals that prevent fuel leaks. Additionally, this fuel suffers from stability issues when stored for long periods of time. Compared to conventional diesel, biodiesel is more hygroscopic, meaning that it attracts more water (Farm Energy 2019). Water can accumulate in biodiesel fuel during transportation and storage, and moisture, if allowed to accumulate for a long time, will alter the fuel's chemical structure. Moreover, in cold weather conditions, the fuel thickens sooner than renewable diesel. Both conditions affect the function of the fuel filter, pump, and injectors in the fuel system of an engine, increasing project costs and the number of engine maintenance cycles. These issues could also result in voided engine warranties.

In addition to these technical problems, the production of biodiesel from plant material could have environmental impacts of its own, including its being a water-intensive operation. Also, biodiesel is expensive, although comparative cost data is not readily available.

Due to technical feasibility issues and potential additional environmental impacts compared to the proposed project, biodiesel fuel as an alternative was eliminated from further analysis.

5.6.2 Fuel Cell Technology Alternative

Another alternative considered but dismissed from further evaluation is fuel cell technology. Fuel cells convert chemical energy into electrical energy. There are several types of fuel cells, which vary according to the types of electrochemical reactions that take place in the cells, the types of catalysts required, the operating temperature ranges, the fuel requirements, and other factors affecting the applications suitable for the fuel cells.

The most promising types of fuel cells for powering data centers are solid oxide fuel cells (SOFCs) and polymer electrolyte membrane or proton exchange membrane (PEM) fuel cells (Microsoft 2014).

5.6.2.1 Solid Oxide Fuel Cells

SOFCs are electrochemical devices that convert the chemical energy of a fuel and oxidant directly into electrical energy. They operate at high temperatures, as high as 2,100 degrees Fahrenheit. Operating at high temperatures enables the SOFCs to use a variety of fuels to produce hydrogen. SOFCs most commonly use natural gas as fuel but can also use biogas and gases made from coal as fuel (U.S. DOE 2022a). Carbon monoxide (CO) is a product of the chemical reaction created by the fuel and steam molecules. SOFCs are resilient and not susceptible to CO poisoning, which affects the voltage output of other types of fuel cells, such as PEM fuel cells. Due to their resiliency against CO poisoning and because they operate at extremely high temperatures, SOFCs can reform fuel internally. This reduces the cost associated with adding a reformer to the system.

Potential Feasibility Issues. SOFCs are typically configured and more suitable to serve as a prime base load power. eBay's data center in Utah uses thirty 200-kilowatt (kW) SOFCs to provide continuous base load power to the IT load (6 megawatts), 8,760 hours per year, with the electric grid as its backup power supply. Additionally, some data centers (e.g., Apple and Equinix) have supplemented their base load power demand (IT and cooling systems) with SOFCs, but they rely on the electric grid to support other loads while retaining traditional uninterruptible power supply (UPS) and generators for emergency power (Data Center Knowledge 2013). However, SOFCs providing power for 100 percent base load demand (i.e., IT and cooling systems) are not yet industry standard for large-scale data centers.

Because it takes time to reach critical operating temperatures, SOFCs have slow startup times, sometimes up to 60 minutes (GenCell 2022). Data centers must have a constant electricity supply, with even a momentary outage risking the loss of data; therefore, they require fast startup from their backup power generators. SOFCs also have a slow response to electricity demand (GenCell 2022). This can pose a problem for data centers, as their IT and cooling load demands constantly fluctuate. Cooling must be able to keep the

internal temperature of the data center buildings steady for the IT servers' optimal performance and must be able to respond quickly to changes in environmental conditions (such as ambient air temperature and humidity). The rapid changes in electricity demand could outpace the SOFCs' ability to provide the needed power supply to a data center.

Another constraint of SOFCs is that due to high operating temperatures SOFCs require the use of durable materials, which are costly. Also, the lack of a sufficient supply of fuel cell components is a concern for potential big users of SOFCs such as data centers. According to the Clean Energy Institute, there is currently a limited production of SOFC components to meet the needs of major users (ZDNet 2021).

SOFCs would use the underground natural gas pipeline system for fuel. At least one pipeline connection would be needed to supply the project with natural gas. A second, independent pipeline connection might be needed for redundancy. The project site has two nearby independent gas distribution lines available for connection. (See the subsection "5.7.2 Alternative 2: Natural Gas Internal Combustion Engine Alternative" below, for a discussion of nearby natural gas distribution lines.)

5.6.2.2 PEM Fuel Cells

Another potentially suitable fuel cell technology for backup energy generation is PEM fuel cell technology (U.S. DOE 2022a). PEM fuel cells are typically used for low-power applications that require intermittent backup power, such as mobile services or small stationary applications, like backup generators for communication towers. Their power capacity ranges between 10 and 125 kW. However, the technology has expanded to data center applications with fuel cell capacity of up to 1 megawatt (MW) delivered in the size of a 40-foot International Organization for Standardization (ISO) container (Plug Power 2021a). For a 100-MW backup generation system, which is approximately the capacity needed for the SVY Data Center (SVYDC), the footprint required for the backup generation system itself would be approximately 32,000 square feet, or 0.73 acre. Should onsite fuel storage be needed, which would be likely, the footprint would further increase. This would not include the amount of space needed for the advanced manufacturing building (AMB).

PEM fuel cells operate at low temperatures and require fuels that are carbon-free and rich in hydrogen content, preferably pure hydrogen, for maximum voltage output and quick start-up times that a data center generator requires. Hydrogen can either be piped into the site or made onsite from a methane source, such as natural gas, or from water through electrolysis. These options are discussed in more detail below. Unlike SOFCs, CO poisoning is an important issue for PEM fuel cells because they cannot tolerate large amounts of CO (Fuel Cell Store 2019).

Potential Feasibility Issues. There are potential feasibility issues in using PEM fuel cells for SVYDC backup generation. Issues involving onsite fuel storage, the lack of pipeline infrastructure, and onsite generation of hydrogen would make it difficult to provide fuel to the PEM fuel cell, as discussed below.

Onsite Fuel Storage

A 1-MW PEM fuel cell consumes approximately 65 kilograms (kg) of hydrogen fuel per hour (Plug Power 2021a). The proposed project would need fuel for a backup duration of up to 24 hours. The amount of hydrogen needed per 1-MW fuel cell for 24 hours of operation would be approximately 1,560 kg.[1] Thus, the project would need approximately 156,000 kg of hydrogen for 100 MW of fuel cells to operate for 24 hours (not including redundant fuel cells).

The simplest way to store large volumes of hydrogen would be to compress it. Hydrogen can be compressed to less than 0.42 percent of its gas volume at atmospheric pressure. The gauge pressure of hydrogen stored as a high-pressure gas is approximately 3600 pounds per square inch (psig) (U.S. DOE 2001). Compressed hydrogen could be transported and stored onsite on a Type IV trailer, which is approximately 53 feet long, 8.5 feet wide, and 13 feet tall, and would support eight, 25-foot-long hydrogen cylinders with a total capacity of 1,152 kg (Catec 2022). The project would need approximately 136 trailers and 62,000 square feet, or 1.5 acres, of space onsite to store fuel for 100 MW of fuel cells for up to 24 hours of operation.

Alternatively, the project could construct a storage system that includes one to several pressure vessels to store such a large amount of compressed hydrogen. The project site would need storage for approximately 300,000 cubic feet,[2] or over 7 acre-feet of compressed hydrogen for 100 MW of fuel cells (not including redundant fuel cells). However, due to the amount of compressed hydrogen needed, the storage space required for this amount of compressed hydrogen is not available on the project site.

Hydrogen can also be stored in liquid form, known as liquid hydrogen gas (LHG), in order to reduce its volume and thus its storage footprint. LHG storage requires a smaller footprint than compressed hydrogen gas for the same hydrogen fuel capacity. LHG could be transported and stored on the same trailer type as compressed hydrogen. However, LHG would have a larger volume of hydrogen capacity, approximately 4,451 kg, stored in a single hydrogen cylinder (Cryogenic 2022). To store the fuel needed for 100 MW of fuel cell capacity for 24 hours of operation, the project would need approximately 36 trailers for LHG storage, which would require 17,000 square feet, or 0.5 acre, of space onsite. This amount of space, when added to the 0.73-acre space needed for the fuel cells, might not be available on the project site. The space for the AMB would be an additional space requirement on the project site.

Alternatively, as mentioned above, the project could construct a storage system that includes one to several pressure vessels to store a large amount of LHG. The project would need approximately 80,000 cubic feet, or 2 acre-feet, of LHG for 100 MW of fuel

1 Hydrogen fuel calculation: 65 kg per hour x 24 hours = 1,560 kg of hydrogen per 1-MW fuel cell

2 Compressed Hydrogen fuel conversion calculation: 65 kg per hour x 24 hours x 1/240 compression ratio x 423.3 cubic feet per kg x 100 MW = 275,100 cubic feet for 100 MW fuel cell

cells (as compared to 300,000 cubic feet, or over 7 acre-feet, for compressed hydrogen gas). However, this amount of space might not be available on the project site.

Although LHG has the benefit of requiring a smaller footprint than compressed hydrogen, problems exist with storing the liquid. LHG would need to be stored and distributed in specialized equipment, including insulated storage tanks, to keep the fuel in liquid state at atmospheric pressure, which requires a temperature of minus 423 degrees Fahrenheit. For LHG to remain at a constant temperature and pressure, it must allow for natural evaporation known as boil-off gas (BOG). BOG is a loss of stored fuel that occurs when the ambient temperature heats the insulated tanks. LHG must release this gas to maintain its liquid state. The release in gas occurs at a rate of approximately 1 percent per day (Army Logistician 2000).

Other constraints exist for both compressed and liquified hydrogen storage systems. Safely managing these systems would require special expertise and equipment, which would add to the cost and complexity of the proposed project. Fuel storage equipment must comply with the standards specified by the National Fire Protection Association along with the San José City Code (City Code) to protect against hazardous material release, fire, and explosions during natural disasters and as the result of accidents. Additionally, permits for the storage of hazardous materials would be needed pursuant to the City Code. The presence of such storage systems would also likely raise concerns of public safety (for example, due to the flammability of hydrogen) and introduce new compliance and potential safety impacts that would not occur under the proposed project.

Pipeline Infrastructure

Supplying hydrogen to the project through pipelines is another possible way of providing fuel for a PEM fuel cells alternative. For large applications, such as the proposed project, hydrogen would need to be supplied through multiple pipelines to mitigate onsite storage challenges and increase reliability. According to the U.S. Department of Energy (U.S. DOE 2022b), there are approximately 1,600 miles of hydrogen pipeline currently operating in the United States.

Moreover, there are technical concerns related to hydrogen pipeline transmission, including the potential for hydrogen to embrittle the steel and welds used in the pipelines. Hydrogen degrades, fatigues, and reduces fatigue resistance of steel and steel welds. The effects of hydrogen on pipeline would remain significant were it not mitigated. Mitigation measures for hydrogen degradation, fatigue, and fatigue resistance include increasing pipe wall thickness, reducing loading of pipe caused by fluctuations in operating pressure, or, alternatively, using fiber reinforced polymer (FRP) piping. FRP would be a viable and accepted alternative to steel pipeline for hydrogen transmission, and in 2016 was accepted into the American Society of Mechanical Engineers (ASME) B31.12 Hydrogen Piping and Pipelines code for up to 170 bar (2,465 psi). However, the infrastructure is not yet built to deliver hydrogen to the project site, contributing to the probable infeasibility of delivering hydrogen to the site.

Onsite Generation

Alternatively, hydrogen for PEM fuel cells can be supplied using other methods, such as reforming and electrolysis.

Reforming

Reforming is a process that uses existing fuels with hydrogen content to react with water, which produces hydrogen and carbon oxides as products.

Steam-methane reforming (SMR) is a type of reforming. It is a thermal process, combining steam with a methane source, such as natural gas, to produce hydrogen and carbon oxides. The proposed project currently has access to two natural gas pipelines that could be used for SMR. (See the subsection "5.7.2 Alternative 2: Natural Gas Internal Combustion Engine Alternative" below, for a discussion of natural gas distribution lines available for connection.) Although SMR is typically used in SOFCs because of the resiliency of the SOFCs' interior components to high levels of CO, it is not suitable for PEM fuel cells. The CO can poison the PEM fuel cells' platinum on the electrode, which leads to lower voltage at a given electrical current density (Fuel Cell Store 2019). SMR could produce the desired hydrogen content for PEM fuel cells should further processing to remove undesired levels of CO be performed, or by using a larger PEM fuel cell where the same amount of CO would be spread over a larger electrode.

Methanol reforming, however, is the leading reforming technology candidate for PEM fuel cells because of its high efficiency and energy density (Fuel Cell Store 2019). Methanol is a liquid, like conventional diesel, and can be stored onsite. Methanol is reformed with water to produce hydrogen and carbon oxides.

Both SMR and methanol reforming consume energy during hydrogen production and produce carbon dioxide (CO_2), which is a greenhouse gas emission, that might be released into the atmosphere, leading to greenhouse gas (GHG) impacts. Also, additional equipment for both types of reforming would increase project costs, although comparative cost data is not readily available.

Electrolysis

Electrolysis can also be used to produce the hydrogen needed for PEM fuel cells. It is a promising option for carbon-free hydrogen production, using electricity to cause the chemical reaction of splitting water into hydrogen and oxygen. The reaction takes place in a unit called an electrolyzer. Like fuel cells, electrolyzers consist of an anode and a cathode separated by an electrolyte. There are different types of electrolyzers mainly due to the different electrolyte materials, such as PEM, alkaline, and solid oxide, but their function is essentially the same—generating hydrogen (U.S. DOE 2022c).

A 1-MW PEM electrolyzer, the size of a 40-foot ISO container,[3] can generate 18 kg of hydrogen per hour. For a 100-MW system, the footprint required for the system would be 32,000 square feet, or approximately 0.73 acre. For every 1 kg of hydrogen produced, the electrolyzer would need 10 kg of water and 49.9 kilowatt-hour (kWh) of energy (Plug Power 2021b). During a grid outage, the amount of electricity to generate enough hydrogen fuel for 100 MW might not be available, rendering the fuel cell inoperable and a data center without power. Therefore, hydrogen might need to be produced and stored onsite for future use during emergency generation. As discussed earlier under "Onsite Fuel Storage," onsite storage of hydrogen has feasibility issues, including storage space, boil-off gas (BOG), the need for specialized equipment, and concerns about public safety.

5.6.2.3 Reliability Issues for Fuel Cell Technology – Summary Conclusions

Fuel cells for large-scale backup generation are not fully proven and have various feasibility constraints, including storage space, BOG, the need for specialized equipment, concerns about public safety, and undetermined reliability. Data center customers demand the most reliable data storage service available, as reflected in the applicant's project objectives, which include the development of a highly reliable data center. Furthermore, data center insurers are not willing to provide insurance coverage unless data centers use proven technologies with an extremely low probability of operational failure. Securing fuel for the cells and storing it is a challenge requiring specialized expertise and increased costs for installing and maintaining systems that are expected to be used only infrequently. Because of the limitations described above, fuel cell technology is not currently a viable alternative to the project's proposed backup generators.

5.6.3 Standalone Battery Energy Storage Alternative

Batteries store chemical energy and convert it to electrical energy. They are used to supply power for many applications. Batteries come in many different shapes and sizes, and different battery types can have different chemical properties. Batteries provide standby or emergency power and almost instantaneous startup times and are therefore considered suitable for backup power for data centers. There are two types of long duration and large capacity battery systems: lithium-ion battery energy storage systems and flow battery energy storage systems.

5.6.3.1 Lithium-ion Battery Energy Storage Systems

The lithium-ion (Li-ion) battery includes an electrolyte solution (Li-ion), separator, anode, cathode, and two electrical current collectors, that are contained in a single cell. The cells are stacked in huge battery banks, and these large battery banks are called a battery energy storage system (BESS). Li-ion batteries have an average monthly round trip efficiency of 82 percent (U.S. EIA 2021).

3 An ISO container is a container which has been built in accordance with the International Organization for Standardization regulations.

Data centers currently use smaller UPS systems consisting of Li-ion batteries to ensure a smooth transition from the grid to the gensets while the gensets synchronize to the data centers' electrical busbars.[4] The UPS system proposed for the project is designed to provide up to 5 minutes of backup power at 100 percent load. UPS systems are proven and reliable to support genset start up, but they are currently limited in power supply duration. A BESS would provide higher capacity and support longer outages for data center projects. A BESS can be designed to provide up to approximately 100 MWs of backup power and the quick start times that a data center requires.

A standalone BESS (used as a single and primary backup generation system during grid outages) for a data center's load demands would require ample onsite storage space for long outage durations. To date, a 400-MW/1600 megawatt-hour (MWh) (supplying 400 MW continuously for 4 hours) BESS is the largest one successfully deployed (Energy Storage News 2022). Until recently, the operational duration of battery systems has been up to 4 hours, not necessarily because battery systems do not have the potential to operate longer, but because a longer duration has not been demonstrated in large-scale data center applications requiring long-duration backup power.

Staff is aware that there was a proposal, the Gilroy Backup Generating Facility (GBGF), for two BESS facilities, each with a capacity of 50 MW and discharge capacity of 640 MWh, for a total capacity of approximately 100 MW and a discharge duration of approximately 13 hours (Amazon Data Services 2021). The GBGF was designed to include diesel-fired gensets to support the data center when the batteries were fully discharged and further backup generation was needed, prior to the electrical grid being restored. However, this project has since been canceled and the application has been withdrawn from the California Energy Commission (CEC) proceedings. The project has since been refiled with the city of Gilroy, to include two phases of construction. Phase I would be 49 MW of capacity using 25, 2.5-MW diesel gensets. Phase II would be 50 MW capacity, with potentially a backup generation technology with either a 13-hour duration BESS or fuel cells. Phase II construction would occur within 4 to 7 years of Phase I based on customer demand. At this time, the long duration batteries and large-scale fuel cells have not been technologically feasible, unless in the future, the technologies' progression is realized (Amazon Data Services 2022).

Potential Feasibility Issues. The employment of a standalone BESS as an alternative to the SVY Backup Generating Facility (SVYBGF) would be the first application of this technology for a project of this magnitude for long durations. The SVYBGF would require storing fuel onsite for approximately 24 hours of backup generation. A 4-MWh battery storage container requires approximately 380 square feet of space. To supply approximately 100 MW of uninterruptable power in case of 24 hours of grid outage, a standalone BESS alternative would need a 2,400-MWh battery system, assuming a 100-percent charging and discharging scenario. This translates to approximately 5 acres of battery storage space needed. The storage space requirement could multiply up to six

4 In electric power distribution, a busbar is a metallic strip or bar used to connect high voltage equipment at electrical switchyards, and low voltage equipment in battery banks.

times for the project to meet its backup generation duration requirement. This footprint could be reduced by stacking the batteries on top of each other; however, the stacked height would be limited. The stacked containers would need to be constructed such that they could be readily accessible for maintenance and potential fire response, while mitigating seismic concerns. Alternatively, the batteries could be stored in multi-story frame structures or buildings to reduce their footprint, but they would then be subject to stricter Building Code fire protection requirements. The added challenge of configuring the batteries to fit the site and meet regulatory requirements would also increase the project cost.

Whether the batteries are single-stacked, double-stacked in containers, or stored in a building, the risk of fires, typically caused by thermal runaway is a potential problem for Li-ion battery systems. Thermal runaway begins when the heat generated within a battery exceeds the amount of heat dissipated to its surroundings. The excess heat can cause components within the battery cell to fail, leading to the Li-ion electrolyte in the anode and cathode to mix—Li-ion is flammable. If the cause of the excessive heat generated is not remedied through heat transfer, the condition will worsen. The internal battery temperature will continue to rise, causing the battery current to rise, thereby creating a domino effect. The rise in temperature in a single battery will begin to affect other batteries in its proximity, and the pattern will continue, thus the term "runaway" (Mitsubishi 2022). There are extensive mitigations, codes and standards, and a comprehensive regulatory framework in place that apply to battery storage to ensure a standard level of reliability for facility operations. However, even with these mitigations in place, risks such as thermal runaway could affect the reliability of the data center and increase the chance that data could be lost. Loss of data would be very disruptive for an operation whose topmost goal is protecting data against loss and guaranteeing continuous and uninterruptable access to data. Furthermore, if a single cell or cluster of the battery system fails, the entire project might be shut down for investigation.

Another constraint of a standalone BESS is that once discharged, the batteries would require power to recharge. The only way they can be recharged without onsite generation is if the utility electrical system is back up and running. Since it is not possible to predict the duration of an electricity outage, batteries are not a viable option for emergency electrical power. Finally, because batteries have a finite lifespan, they would probably have to be replaced at least once during the life of the project. This would add to the project's cost by an unknown but potentially considerable amount.

5.6.3.2 Flow Battery Energy Storage Systems

Alternatively, the flow battery is another type of battery energy storage system. The flow battery, also called redox (reduction-oxidation) battery, includes two external tanks containing an anode and cathode electrolyte solution. The electrolyte solutions are aqueous and non-flammable, which pose no fire risks separately or when mixed. The solutions are pumped through the electrode flow cell(s) where electrodes extract electrons and electricity is generated.

Many different electrolyte solutions are used in the flow battery system and paired as such: vanadium/vanadium, iron/chromium, iron/water, or zinc/bromine. However, in battery systems that use zinc/bromine the zinc is deposited on the electrode, and these systems are known as hybrid flow battery systems.

Flow batteries are currently capable of discharging power for up to 8 hours. They can be designed to discharge for more than 8 hours by increasing the volume of electrolyte being stored.

Flow batteries have a round trip efficiency of between 38 and 75 percent and are designed for utility-scale applications to support peak electricity demand. In addition, flow batteries have a lifespan of at least 20 years.

Potential Feasibility Issues. Similar to the Li-ion BESS, the employment of a standalone flow battery system as an alternative to the SVYBGF would be the first application of this technology for a project of this magnitude for long durations. The SVYBGF would require storing fuel onsite for approximately 24 hours of backup generation. To supply approximately 100 MW of uninterruptable power in case of 24 hours of grid outage, a standalone flow battery alternative would need a 2,400-MWh battery system, assuming a 100 percent charging and discharging scenario. This translates to 25 acres or more of battery storage space needed, depending on the flow battery technology and manufacturer. This amount of storage space is not available on the project site.

Like Li-ion battery systems, once discharged, flow batteries would require power to recharge. This battery's maximum 8-hour duration would not meet the project's requirement of 24 hours of continuous backup electricity. Further design considerations would be needed for a standalone BESS to potentially replace the proposed project's diesel-fired gensets.

5.6.4 Tandem Battery Energy Storage Alternative

Staff considered a battery energy storage system in tandem (tandem BESS) with the proposed project's renewable diesel-fired gensets. A tandem solution proposal would not be the first of its kind for a data center application, as previously mentioned. Such an option would allow the batteries to act as primary backup power for short outage durations, while the project's 39 diesel-fired gensets would provide backup power when outages are longer in duration and the batteries have been discharged.

For this project, staff assumes a tandem solution would include an approximately 100-MW-capacity BESS with a discharge duration of 4 hours (since this is the duration that is currently available). The battery system would supply backup power for a duration of approximately 4 hours, and once the batteries have been discharged the 39 gensets would serve to back up the battery system until the electrical grid is restored. However, having a tandem solution would not reduce the number of gensets required for the project; again, the gensets would need to be sufficient to support data center load

demands for longer outages if necessary. The battery system for a tandem BESS would require approximately 152,000 square feet (3.5 acres) of storage space.

5.6.4.1 Potential Feasibility Issues

The project site does not provide sufficient room for the proposed project and the tandem BESS' 152,000 square feet (3.5 acres) of battery storage. Also, project cost would increase significantly with a 400-MWh BESS configuration. Between 2015 and 2018, the average cost of utility-scale battery storage in the United States rapidly decreased from $2,152 to $625 per kWh. However, in 2019, the average cost of battery storage in California was higher than the national average, costing $1,522 per kWh (U.S. EIA 2020). In addition, the required reliability of the tandem BESS would need to be ensured. The electrical and electronic interface between the batteries and gensets would need to be tested to ensure operational reliability, with many large-scale data centers requiring at least 99.999 percent reliability.

The 2022 California Energy Code (California Building Standards Code [Cal. Code Regs., Title 24] Part 6, Building Energy Efficiency Standards, Nonresidential Photovoltaic and Battery Storage) requires battery storage systems when photovoltaic (PV) systems are required (i.e., for construction of new buildings). This regulation does not apply to data centers. The use of battery systems set forth in the California Energy Code update through its goals and primary functions is much different than that of large-scale data centers. Appendix JA12 of the updated code states that the primary function of the battery storage system is daily cycling for the purpose of load shifting, maximized solar self-utilization, and grid harmonization. The measure predicts that 100 MW of batteries will be installed in new nonresidential buildings in 2023 (DGS 2022). Given this prediction, it is assumed that many small capacity batteries would be installed across many buildings with PV generation to reduce peak demand for a few hours.

The goal and primary function of battery systems for large-scale data centers with large capacity demand (99 MW) is not daily cycling, but to provide backup power during a grid electrical outage lasting many hours. The daily cycling of battery systems reduces the overall lifespan of the battery system, increases wear and tear, and might reduce battery system reliability. Also, the reliability requirements of small capacity batteries used for peak demand relief for limited duration is different than large capacity batteries used as a backup power solution in large-scale data centers. Should a battery system of a building used for peak demand relief fail for any reason, the grid would still provide power to support the building's load. In contrast, if a single cell in a backup battery system fails, the whole system would be rendered inoperable and the battery system would need to be taken offline and inspected. Again, for a data center such as the proposed project, the only backup energy in the event of a grid outage would be from its backup power source. The reliability of the project's backup power source is of utmost importance to ensure customers' data is not lost.

5.6.5 No Advanced Manufacturing Building Alternative

The STACK Trade Zone Park is proposed to include an approximately 136,573 square foot, four-story advanced manufacturing building (AMB) to serve a demand in San José for employees with technical skills training. An onsite parking garage is proposed to provide parking spaces for the two data centers and the AMB. The total employment anticipated for the STACK Trade Zone Park after full site buildout would be approximately 339 (70 employees for the SVY Data Center and 269 for the AMB) (DayZenLLC 2022n). Staff initially considered the potential feasibility of an alternative that would omit the AMB from the proposed project and evaluated whether such an alternative could substantially reduce the impact on transportation relating to vehicle miles traveled (VMT). Staff also considered whether such an alternative would be consistent with the *Envision San José 2040 General Plan* (General Plan).

CEQA requires an analysis to determine whether VMT generated by a project would cause a significant impact on transportation. (VMT refers to the amount and distance of automobile travel attributable to a project.) Staff assessed the proposed project's VMT impact based on the city of San José (City) threshold of significance for industrial employment uses of 14.37 VMT per employee. The STACK Trade Zone Park's generation of an estimated total of 15.07 VMT per employee would exceed the threshold and cause a significant impact on transportation (DayZenLLC 2022w). VMT reduction measures are recommended to reduce the impact to a less-than-significant level. (See the analysis in **Section 4.17 Transportation**)

Staff considered whether an alternative that would omit the AMB from the project would reduce VMT such that it would meet the City's screening criteria and established thresholds, thereby reducing the project's transportation impact to less than significant without implementing VMT reduction measures. Staff evaluated this scenario and concluded that VMT generated by the project would remain above the City's industrial VMT threshold of 14.37 per employee. Removal of the AMB would not reduce VMT to a level below the City's industrial VMT threshold.

The General Plan Land Use/Transportation Diagram shows that the project site is designated TEC, Transit Employment Center. The TEC designation is "applied to areas planned for intensive job growth because of their importance as employment districts to the City and high degree of access to transit and other facilities and services" (San José 2022). The City submitted comments on consistency of the STACK Trade Zone Park with the General Plan and the City's other applicable regulations and policies. The comments include a discussion of the site's TEC designation, stating that "it is imperative that the employment-focused manufacturing building remain a focal use of the site…" and that the manufacturing space must be "designed to facilitate employment uses to the highest extent feasible." The City's comments also state: "To demonstrate a high level of employment use at the site, future application materials should include a narrative outlining the incorporated design measures that will facilitate a viable advanced manufacturing building" (DayZenLLC 2021e). Staff concluded that this alternative would not meet the City's long-term plans for land uses on properties designated TEC. The City's

potential finding of conformance of the proposed project with the General Plan is substantially based on the expectation that the AMB will remain a key, employment-focused use of the site.

5.6.5.1 Potential Feasibility Issues

General Plan consistency is a factor to consider in determining potential feasibility of an alternative. The City's comments specify that the AMB "is a cornerstone of the General Plan conformance…" (DayZenLLC 2021e). Therefore, the No Advanced Manufacturing Building Alternative is not considered a potentially feasible alternative to the proposed project.

5.6.6 Alternative Project Site

The applicant's project objectives specify locating the STACK Trade Zone Park near existing STACK Infrastructure data center facilities. In October 2021, STACK Infrastructure announced that it had opened a new 32-megawatt (MW) data center on its Silicon Valley campus; the new data center (SVY02) is next to its 9-MW data center (SVY01) at 2001 Fortune Drive (Data Center Dynamics 2021). STACK Infrastructure owns the properties at 2001 Fortune Drive, and in early 2021 it purchased the adjacent properties for the STACK Trade Zone Park (The Mercury News 2021). The time and resources required to secure property access and obtain necessary approvals at a different site could theoretically prevent successful accomplishment of the project, and in that scenario none of the project objectives would be attained.

STACK Infrastructure previously received approvals from the City for the adjacent data center projects, including expansion of its data center operations at 2001 Fortune Drive. With implementation of required design measures, such approvals indicate that the City considers a data center to be an appropriate use that is compatible with the pattern of industrial, technology-based, and commercial uses in the area. Generally, a site being proposed for a use that is consistent with the plans governing land uses in an area is preferred over a site with difficult policy, regulatory, or environmental issues to resolve. (See **Section 4.11 Land Use and Planning** for discussions of applicable plans and policies and zoning regulations.)

The proposed linear infrastructure connections are adjacent to the project site, along Trade Zone Boulevard, Ringwood Avenue, and Fortune Drive; such nearby connections for domestic water, reclaimed water, fire water, sanitary sewer, fiber line, and storm drainage would reduce construction impacts compared to sites with longer routes and increase suitability of the site location for the proposed use. The offsite electrical connections (one underground and one above ground) are each approximately 0.25 mile long and would be installed along Trade Zone Boulevard.

In considering alternative locations, CEQA provides that the key question is "whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location" (Cal. Code Regs., tit. 14, § 15126.6, subd. (f)(2)(A)). Staff concluded in the analysis of potential environmental impacts of the

proposed site contained in this EIR that impacts would be reduced to less-than-significant levels with implementation of staff's recommended mitigation measures. As such, there are no significant impacts to afford comparison in this context.

5.6.7 Decision to Eliminate These Alternatives from Further Consideration

The applicant's purpose for the SVY Data Center (SVYDC) is to provide customers with mission critical space to support its servers, including space conditioning and a steady stream of high-quality power supply (DayZenLLC 2021a). The applicant's key objectives are to incorporate the most reliable and flexible form of backup electric generating technology into the SVY Backup Generating Facility (SVYBGF) considering commercial availability and feasibility, technical feasibility, and reliability. Specifically, the SVYBGF must provide greater than 99.999 percent reliability for data center customers. Biodiesel fuel, fuel cells, and battery storage alternatives were eliminated from further consideration as alternative technologies to the proposed project based on their infeasibility and/or lack of a sufficient level of proven reliability in large-scale data center applications, such as this project. Data center customers need the most reliable data storage service available, and data center insurers are willing to provide coverage only for proven technologies with an extremely low probability of operational failure.

The No Advanced Manufacturing Building Alternative was eliminated from further consideration because it would not be consistent with the City's General Plan designation of TEC for the site. Neither would it substantially reduce the impact on transportation relating to VMT.

Consideration of alternative sites is unnecessary because staff has identified no impacts that could be avoided by placing the project at a different location. The project would be consistent with existing land uses in the area near the proposed project site. And, because STACK Infrastructure owns the site, a different property where site control is lacking is unlikely to present a potentially feasible alternative for the applicant to pursue. Therefore, no alternative site was identified for study in this analysis of alternatives to the proposed project.

5.7 Alternatives Selected for Analysis and Comparison to the Proposed Project

The following alternatives were carried forward for full analysis and comparison to the proposed project in this EIR:

- Alternative 1: No Project/No Build Alternative
- Alternative 2: Natural Gas Internal Combustion Engine (ICE) Alternative

The No Project/No Build Alternative (Alternative 1) is required for analysis in every EIR. CEQA provides that the discussion of project alternatives is to focus on those that could feasibly avoid or lessen the proposed project's potentially significant impacts, "even if these alternatives would impede to some degree the attainment of the project objectives,

or would be more costly" (Cal. Code Regs., tit. 14, § 15126.6, subd. (b)). A comparative analysis of the impacts of the alternatives is provided below, followed by an assessment of the extent to which each alternative could meet the basic project objectives. An assessment of potential feasibility issues is provided for the Natural Gas ICE Alternative (Alternative 2).

The comparative analysis of impacts is centered on the topics of air quality, public health, and greenhouse gas (GHG) emissions. For the other topics covered in this EIR, staff's analyses show essentially no differences between the impacts identified under the proposed project and Alternative 2. The discussions below summarize the environmental effects for Alternative 1 and Alternative 2 compared to the proposed project. (See also **Table 5-1**, below.) It is assumed that the project site location would remain the same under Alternative 2.

5.7.1 Alternative 1: No Project/No Build Alternative

The STACK Trade Zone Park site consists of two parcels covering approximately 9.8 acres. The parcels are located at 2400 Ringwood Avenue and 1849 Fortune Drive in San José. In January 2022, STACK Infrastructure filed an application with the city of San José (City) to rezone both parcels from the Industrial Park (IP) zoning district to a Transit Employment Center – Planned Development Zoning District, or TEC (PD) zoning district. (See **Section 4.11 Land Use and Planning** for discussions of land use designations and zoning for the site.)

The project site is developed with two, existing one-story buildings. The existing building at 2400 Ringwood Avenue (Olympus Building) includes approximately 80,000 square feet and is currently occupied. The existing building at 1849 Fortune Drive (Fortune Drive Building) includes approximately 55,000 square feet and is currently unoccupied. Under the proposed project, the first phase of construction would include demolition of both buildings and infrastructure that would not be reused.

A new project could eventually be approved at the STACK Trade Zone Park site that would be compatible with other uses in the surrounding area should the proposed project not move forward. Although a different project could be proposed at the site in the future, no development plan exists to allow a comparison with the proposed project, and it would be speculative to assume the characteristics of such an alternative. Therefore, under the No Project/No Build Alternative, current conditions would continue at the site for an unknown period. If the proposed project were not constructed, the applicant's primary goal to develop the site within the City's technology core area to include advanced manufacturing and the data centers, along with the basic project objectives, would not be attained.

As discussed in subsection "5.5 Environmental Impacts of the Proposed Project" above, staff recommends mitigation measures to reduce all potentially significant impacts identified in this EIR to less-than-significant levels. The No Project/No Build Alternative would avoid the proposed project's potentially significant impacts (*no impact* compared

to the proposed project) because no project construction and operation would occur, summarized as follows:

- **Air Quality** – This alternative would avoid construction-related air emissions due to fugitive dust and exhaust from heavy duty construction equipment. This alternative would avoid the operational emissions related to maintenance testing and operation of the diesel-fired engine generators.
- **Biological Resources** – This alternative would avoid potentially significant impacts on biological resources, including special-status plants and wildlife.
- **Cultural and Tribal Cultural Resources** – This alternative would avoid discovery of, and potential impacts on, buried archaeological and Native American resources that could otherwise be encountered during ground disturbing activities.
- **Geology and Soils** – This alternative would avoid disturbing paleontological resources during earth moving activities, were they discovered at the site.
- **Greenhouse Gas Emissions** – This alternative would avoid project-related direct GHG emissions from the diesel fueled generators and the indirect GHG emissions from the electricity use of the data center.
- **Hazards and Hazardous Materials** – This alternative would avoid impacts associated with encountering contaminated soil during ground disturbing activities and removal of underground utilities.
- **Noise** – This alternative would avoid construction noise impacts at nearby residences and businesses.
- **Transportation** – This alternative would avoid the addition of vehicle miles traveled on the transportation system.

5.7.2 Alternative 2: Natural Gas Internal Combustion Engine Alternative

Natural gas internal combustion engines (ICEs) are fueled by natural gas, while the proposed engines for the project would use renewable diesel (with ultra-low sulfur diesel as backup). Natural gas ICEs are available in capacities of up to 18 MW each. Their physical dimensions vary in size depending on their MW capacity. For example, one of the natural gas ICEs from manufacturer Power Solution International (PSI) has a capacity of 445 kW and a nominal height of 12 feet. One of the natural gas ICEs manufactured by Innio has a capacity of 3 MW with a height for the genset assembly of 23 feet. As a point of reference, the height of the proposed diesel genset assembly for the proposed project is 30.2 feet.

Under this alternative, the footprint of the natural gas ICEs might not be the same as for the proposed diesel-fired gensets. The number of engines and associated equipment, height, fuel delivery, and onsite fuel storage would be different. However, it is assumed under this alternative that the massing and locations of the data center buildings would be essentially the same as for the proposed project.

Data centers require a power generating solution with quick start times. The time it takes a natural gas ICE to begin carrying data center load from its power-off position (the moment the engine synchronizes to the bus bar) varies depending on the natural gas ICE's size and capacity. In the meantime, the UPS system can provide power to the data center while the ICEs startup. The startup time for the PSI natural gas ICEs and the Innio natural gas ICEs are fast enough that the proposed project's UPS system would not need to be redesigned.

5.7.2.1 Air Quality and Public Health

Staff compared criteria air pollutant emissions of natural gas ICEs against the proposed diesel-fired engines for the SVY Backup Generating Facility (SVYBGF). The proposed 36, 3-MW and three, 1-MW engines for the proposed project would be equipped with selective catalytic reduction (SCR) equipment and diesel particulate filters (DPF) to achieve compliance with Tier 4 emission standards (DayZenLLC 2022n). However, it takes time for SCRs to reach their activation temperature and become fully effective in controlling NOx emissions. Depending on load, the SCR would be expected to become fully operational within 15 minutes.

For the Natural Gas ICE Alternative, information is primarily based on the data provided for the San José Data Center (SJDC) application (Jacobs 2021a) (Docket #19-SPPE-04). (The CEC adopted an order approving the small power plant exemption for the SJDC on July 13, 2022.)[5] The natural gas ICEs for the SJDC will be equipped with a 3-way catalyst system to reduce emissions of NOx, CO, volatile organic compounds (VOCs), and air toxics. The applicant for the SJDC also assumed 15 minutes of operation with uncontrolled emissions and 45 minutes of operation with controlled emissions to estimate hourly emissions (Jacobs 2021b).

Staff compared the emission factors in pounds per megawatt-hour (lbs/MWe-hr) for the proposed diesel-fired engines for the SVYBGF and those for the natural gas ICEs at the SJDC. Staff assumed the same 15-minute warm up period for the SCRs of the diesel engines and the 3-way catalyst system for the natural gas ICEs. As shown in **Table D-1** of **Appendix D**, the emission factors in lbs/MWe-hr for the NOx emissions would reduce by more than 98 percent using natural gas ICEs compared to the proposed diesel-fired engines for the SVYBGF. The particulate matter (PM) emissions would reduce by more than 77 percent using natural gas ICEs compared to the proposed diesel-fired engines. The VOC emissions would reduce by about 46 percent using natural gas ICEs compared to the proposed diesel-fired engines. The CO emissions would reduce by about 78 percent using natural gas ICEs compared to the proposed diesel-fired engines. The sulfur dioxide (SO_2) emissions would reduce by about 42 percent using natural gas ICEs compared to the proposed diesel-fired engines.

5 The city of San Josè has an ordinance prohibiting natural gas infrastructure in newly constructed buildings (San José Municipal Code Section 17.845.030). Under the Natural Gas ICE Alternative, the project owner would need to apply for and might be granted an exemption from the ban, just as was done for the SJDC project (Jacobs 2022).

It should be noted that the emission factors for the proposed diesel-fired engines shown in **Table D-1** of **Appendix D** are based on the use of petroleum-based diesel. However, the applicant has proposed to use renewable diesel as the primary fuel for the engines, with ultra-low sulfur diesel serving as a secondary fuel to be used only when renewable diesel is unavailable. The California Air Resources Board (CARB) 2021 testing report shows that for diesel engines with SCR and DPF, there are no statistically significant differences in NOx, PM, and total hydrocarbon emissions using renewable diesel when compared to ultra-low sulfur, petroleum-based diesel (CARB 2021). For CO emissions, there are either no statistically significant differences (or emissions were already below background levels) between renewable diesel and ultra-low sulfur, petroleum-based diesel or 5 to 44 percent decreases using renewable diesel compared to ultra-low sulfur, petroleum-based diesel, depending on the testing cycle used. Ideally, this should be confirmed with testing under controlled conditions using the same size of engine proposed for this facility and employing the same test cycle used for engine certification. With the currently available information, staff expects the comparison results of criteria air pollutant emissions of the Natural Gas ICE Alternative to the proposed diesel engines using renewable diesel to be similar to those shown for ultra-low sulfur diesel in **Table D-1** of **Appendix D**, except that the exact percent reduction in CO emissions would be different depending on the testing cycle used.

Staff is unable to find data comparing air toxics emissions of natural gas ICEs with those for diesel-fired engines; however, these are expected to be reduced due to the reductions reported for VOCs and PM.

In addition, staff does not assume additional operation of the natural gas ICEs to offset the cost difference between the technologies and acknowledges that the capital cost of natural gas ICEs could increase project costs. Staff acknowledges that the operational profile might be different for the natural gas ICEs, and annual emissions may be higher since they might operate more based on other project applications, such as participation in a demand response program. However, staff is not able to predict the exact number of operation hours and the associated emissions for the natural gas ICEs in such a scenario since it is unknown how much grid support service would be provided. Therefore, staff only compares the emission factors in lbs/MWe-hour for the natural gas ICEs and those for the renewable diesel-fired engines for the proposed project, assuming a similar operating profile.

Air quality impacts using natural gas ICEs are expected to be *much less* than those that would occur with the proposed diesel-fired engines for the project. This would result independent of whether the engines are fueled on renewable diesel or ultra-low sulfur, petroleum-based diesel. Public health impacts from toxic air contaminants using natural gas ICEs are *likely less* than those that would occur with the proposed diesel-fired engines for the SVYBGF, similarly irrespective of the type of diesel used.

5.7.2.2 Greenhouse Gas Emissions

As shown in **Table D-1** of **Appendix D**, natural gas fueled ICEs would reduce tailpipe GHG emissions by approximately 8 percent from conventional diesel-fired engines. However, the applicant has proposed to use renewable diesel as primary fuel in the proposed engines. Mitigation measure **GHG-1** would require the applicant to use renewable diesel for 100 percent of total energy use by the emergency backup generators, and only use ultra-low sulfur diesel as a secondary fuel in the event of supply challenges or a disruption in obtaining renewable diesel. CARB's 2021 testing report (CARB 2021) shows that the tailpipe CO_2 emissions would reduce about 3 to 4 percent using renewable diesel compared to ultra-low sulfur, petroleum-based diesel. Therefore, the tailpipe CO_2 emissions of natural gas ICEs would only be about 4 to 5 percent lower than those for the proposed engines using renewable diesel.

To have a more complete understanding of the impact of replacing diesel with natural gas, it is necessary to examine the full fuel-cycle of each fuel from origin to use. This is because GHGs have a global impact rather than a local impact. As shown in **Table D-2** of **Appendix D**, when extending to the full fuel cycle, GHG emissions from natural gas ICEs fueled with pipeline natural gas produced from fossil feedstocks would be about 20 percent lower than those from conventional diesel as indicated by the carbon intensity values. Moreover, natural gas feedstocks from some renewable feedstocks may have a much lower carbon intensity. The carbon intensity values of most renewable feedstocks are even negative, reflecting a net reduction in fuel cycle carbon emissions. However, **Table D-2** of **Appendix D** also shows that there are 61 to 83 percent reductions in carbon intensity values using renewable diesel in place of ultra-low sulfur, petroleum-based diesel. Therefore, in order for the natural gas ICEs to remain an environmentally superior alternative to the proposed diesel engines using renewable diesel, it would be required to use a certain percentage of renewable natural gas to reduce the fuel cycle GHG emissions. Since there are uncertainties regarding how much renewable natural gas would be used, the comparative impact is *likely similar* under this alternative.

Fossil natural gas and some forms of renewable natural gas still have some carbon associated with the fuel cycle. These show up in the table for those fuels with a carbon intensity that is greater than zero. In these cases, additional measures could be needed before an alternative fueled by natural gas would be considered a carbon-free facility.

5.7.2.3 Potential Feasibility Issues and Attaining the Project Objectives

Natural gas ICEs are cleaner burning due to the type of fuel; however, the technology is not without feasibility issues. The proposed project would employ 39 total backup gensets (including the three house gensets to support redundant critical cooling equipment and other general building and life safety services). Depending on the MW size of the natural gas ICE engine, more engines may or may not be needed under this alternative. There are two potential fuel supply methods: onsite storage and pipeline connection.

Onsite Fuel Storage. Onsite storage would require redesigning the project and would suffer from some feasibility issues. The project would need approximately 201 million

gallons of natural gas storage to provide 24 hours of backup natural gas ICE operation, the same backup duration as for the proposed project. Liquefied natural gas (LNG)[6] would minimize the storage space, but the needed storage volume would still be substantially larger than that of diesel fuel (both renewable or conventional).[7,8] LNG would also need to be stored and distributed with specialized equipment, including storage in insulated tanks to keep the fuel in a liquid state at minus 260 degrees Fahrenheit. For LNG to remain at a constant temperature and pressure, it must allow for natural evaporation known as BOG. BOG is essentially a loss of stored fuel that occurs when the ambient temperature heats the insulated tanks. LNG must release this gas to maintain its liquid state. To mitigate the loss of fuel and gas release into the atmosphere, BOG can be reliquefied and put back into the LNG tank or used as fuel in certain marine applications, steam turbines, or in a gasification unit for creating alternative fuels. LNG would also need to undergo a regasification process for the fuel to be used in natural gas ICEs. Both reliquefaction and regasification would result in additional processes and equipment and an increased footprint.

In addition, fuel storage, reliquefication, and regasification equipment must comply with standards specified by the National Fire Protection Association and the City Code to protect against hazardous material release, fire, and explosions during natural disasters and as the result of accidents. Also, permits for the storage of hazardous materials would be needed pursuant to the City Code.

Pipeline Infrastructure. The preferred, most feasible method to supply fuel for the natural gas ICEs would be by pipeline through Pacific Gas and Electric's (PG&E's) underground natural gas transmission system. Based on PG&E's gas transmission pipeline map, the two closest locations for independent natural gas pipeline connections are one adjacent to the project site on Fortune Drive and one approximately 0.5 mile east of the project site along Trade Zone Boulevard.[9] The project's primary pipeline would connect to the nearby gas line on Fortune Drive. Another pipeline connecting to the gas line at Trade Zone Boulevard could also be installed to provide added reliability. It is assumed that new pipelines would be constructed along existing roadway rights-of-way and utility corridors. The natural gas pipeline trenches would be approximately 6 feet deep and 4 to 6 feet wide, with a minimum cover depth of 36 inches.

Pipelines are susceptible to natural disasters (e.g., earthquakes) as well as accidents. This can potentially cut off fuel supply to the project during a grid outage. Access to the

6 Natural Gas can be liquefied to 600 cubic meters times smaller than its volume in its gas state.

7 LNG calculated as: Approximate ICE Fuel Consumption 9,500 cubic feet per megawatt-hour x 118 MW (includes redundant engines) x 24 hours of backup duration = 26,904,000 cubic feet of natural gas = 201 million gallons.

Conversion Cubic feet gas to liquid gallons: 26,904,000 cubic feet x 0.0283168 cubic meter gas x (1 cubic meter LNG / 600 cubic meter gas) x 264.172 liquid gallons = 335,426 gallons.

8 Renewable diesel volume for current proposal: Genset Fuel Consumption (208.2 gal/hr x 24 hours per year x 36 generators + 71.5 gal/hr x 24 hours per year x 3 generators) = 185,032 gallons per year

9 Along Fortune Drive to Lundy Avenue to and along Trade Zone Boulevard.

secondary pipeline 0.5 mile east of the project site on Trade Zone Boulevard would increase fuel supply reliability. The Natural Gas ICE Alternative could potentially be feasible and attain most of the project objectives, and it could connect to the underground natural gas pipeline system.

The installation of natural gas pipelines could cause temporary impacts during construction. Staff assumes that implementation of the same mitigation measures for the project would apply to pipeline construction impacts under this alternative (e.g., measures to reduce impacts in the areas of Air Quality, Biological Resources, Cultural and Tribal Cultural Resources, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, and Transportation). Staff would recommend mitigation measures to reduce any potentially significant impacts from gas pipeline construction to less-than-significant levels.

However, for the SVY Data Center (SVYDC) to provide the same level of reliability with ICEs as it would with the renewable diesel-fired gensets, or at least 99.999 percent availability factor, the ICE fuel delivery system under this alternative must not be susceptible to any disruptions. Although two natural gas pipelines are available for the project, and PG&E has verified that the project could connect to both pipelines, due to the pipelines' susceptibility to natural disasters (e.g., earthquakes) as well as accidents, the ICE fuel delivery and storage system under this alternative might provide a slightly lower level of reliability than has been demonstrated by the diesel fuel delivery and storage system for many data centers.

The CEC recently issued a Small Power Plant Exemption for the SJDC, mentioned earlier in this section. The SJDC, which is owned by Microsoft but is not yet in operation, will use natural gas ICEs for backup generation during grid outages and will be used for its own Microsoft-affiliated clients (Jacobs 2021b). One of the reasons Microsoft chose to use ICEs for the SJDC might be because Microsoft has more flexibility in where it can store data, whereas other data centers such as the SVYDC typically cater to outside clients and might not have such flexibility. Microsoft might own redundant data centers, or mirror sites, such that the same data can be stored in parallel with the data stored by the SJDC. A data center, such as the SVYDC, that caters to multiple outside clients might require a slightly higher level of reliability because it might not be possible to store the same customer's data at parallel sites. Therefore, the ICE technology, which requires gas pipelines, might not be feasible for the SVYDC.

5.8 Environmentally Superior Alternative

"If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives" (Cal. Code Regs., tit. 14, § 15126.6, subd. (e)(2)). Alternative 1, the No Project/No Build Alternative, is the environmentally superior alternative because it would avoid all impacts of the proposed project by not creating any physical change to the environment. However, Alternative 1 would not attain any of the project objectives.

Staff compared Alternative 2, the Natural Gas ICE Alternative, to the proposed project and determined that it has some advantages in terms of reducing impacts. Staff's conclusions are summarized below.

5.8.1 Alternative 2: Natural Gas Internal Combustion Engine Alternative

The GHG impacts of this alternative would likely be similar to those of the proposed project if renewable natural gas were used for this alternative. Criteria air pollutant emissions and air quality impacts using natural gas ICEs are expected to be much less than those that would occur with the proposed project's gensets. Staff is not able to find data comparing the air toxics emissions of natural gas ICEs with those for diesel engines, but these are expected to be reduced due to the reductions reported for VOCs and PM. Therefore, public health impacts using natural gas ICEs would likely be less than those that would occur with the project's diesel engines.

Staff considers Alternative 2 to be *environmentally superior* to the proposed project due to its deep reductions in criteria air pollutants. Redesigning the project with natural gas ICE technology could increase the number of engines onsite depending on the MW sizing and physical dimensions. As discussed earlier, two gas pipeline connections are available and likely needed to match the fuel supply reliability of the proposed project. Permitting and construction of the new pipelines would take time to complete.

Table 5-1 summarizes the comparison of environmental effects for each alternative to the proposed project for the topics of air quality, public health, and GHG emissions. As discussed above, staff's comparative analyses for the other topics covered in this EIR show essentially no differences between the impacts identified under the proposed project and the Natural Gas ICE Alternative. The No Project Alternative would result in no impacts.

TABLE 5-1 SUMMARY COMPARISON OF IMPACTS OF THE PROPOSED PROJECT TO THE ALTERNATIVES

Environmental Topics and Impacts	Proposed Project	Alternatives	
		No Project/No Build	Natural Gas Internal Combustion Engine
Air Quality, Public Health, Greenhouse Gas (GHG) Emissions			
Criteria air pollutants	LTS with Mitigation	No Impact	LTS with Mitigation (Much Less)
Toxic air contaminants (TACs)	LTS	No Impact	LTS (Likely Less)
GHG emissions	LTS with Mitigation	No Impact	LTS with Mitigation (Likely Similar)

Notes: Impact conclusions for the proposed project and the alternatives in **Table 5-1** are shown using these abbreviations:
No Impact = the proposed project or an alternative has no potential to affect the resource
LTS = less-than-significant impact, no mitigation required
LTS with Mitigation = mitigation measure(s) required to reduce a potentially significant impact to less than significant

The comparisons of impacts to the proposed project in **Table 5-1** are conveyed using these abbreviations (staff identified no impacts that would be greater than the proposed project):

- Much Less
- Likely Less (conclusion that is estimated and cannot be fully verified with available data)
- Likely Similar (conclusion that is estimated and cannot be fully verified with available data)

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Section 6

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6 Authors and Reviewers

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Section 7

Mitigation Monitoring and Reporting Program

MITIGATION MONITORING AND REPORTING PROGRAM

STACK Trade Zone Park
21-SPPE-02
Planning File Nos. PD22-001 and ER22-002
January 2023

PREFACE

Section 21081.6 of the California Environmental Quality Act (CEQA) requires a Lead Agency to adopt a Mitigation Monitoring and Reporting Program (MMRP) whenever it approves a project for which measures have been required to mitigate or avoid significant effects on the environment. The purpose of the monitoring and reporting program is to ensure compliance with the mitigation measures during project implementation.

While the CEC is the lead agency in assessing the exemption application, the CEC is not the jurisdiction that will be approving the project for construction and operations. Such authority will be with the City of San José. Therefore, the MMRP will be implemented and enforced by the City upon its approval of the project.

The Final Environmental Impact Report prepared for the STACK Trade Zone Park project concluded that the implementation of the project would not result in significant effects on the environment with the incorporation of mitigation measures. This MMRP addresses those measures in terms of how and when they will be implemented.

This document does *not* discuss those subjects for which the Final Environmental Impact Report concluded that the impacts from implementation of the project would be less than significant.

I, _____, the applicant, on the behalf of _____, hereby agree to fully implement the mitigation measures described below which have been developed in conjunction with the preparation of an EIR for my proposed project. I understand that these mitigation measures or substantially similar measures will be adopted as conditions of approval with my development permit request to avoid or significantly reduce potential environmental impacts to a less than significant level.

Project Applicant's Signature _____

Date_____

MITIGATION	MONITORING AND REPORTING PROGRAM				
	Documentation of Compliance [Project Applicant/Proponent Responsibility]		Documentation of Compliance [Lead Agency Responsibility]		
	Method of Compliance Or Mitigation Action	**Timing of Compliance**	**Oversight Responsibility**	**Actions/Reports**	**Monitoring Timing or Schedule**
AIR QUALITY					
Impact 4.3-b Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?					
AQ-1: To ensure that fugitive dust impacts are less than significant, the project will implement the Bay Area Air Quality Management District (BAAQMD) recommended Best Management Practices (BMPs) during the construction phase, the project owner shall implement a construction emissions control plan that has been reviewed and approved by the Director or Director's designee of the City of Santa Clara Planning Division prior to the issuance of any grading or building permits, whichever occurs earliest. These BMPs are incorporated into the design of the project and will include: • Water all exposed areas (e.g. parking areas, graded areas, unpaved access roads) twice a day. • Maintain a minimum soil moisture of 12% in exposed areas by maintaining proper watering frequency. • Cover all haul trucks carrying sand, soil, or other loose material. • Suspend excavation, grading, and/or demolition activities when average	Prepare and implement a fugitive dust control plan	Prior to and during construction phase	City of San José Director of Planning, Building or Code Enforcement or Director's designee	Receive and approve the fugitive dust control measures during construction	Prior to the issuance of any demolition, grading, or building permits (whichever occurs earliest)

wind speed exceeds 20 miles per hour. • Pave all roadways, driveways, and sidewalks as soon as possible. Lay building pads as soon as grading is completed, unless seeding or soil binders are used. • Use a power vacuum to sweep and remove any mud or dirt-track next to public streets, if visible soil material is carried onto the streets. • Limit vehicle speeds on unpaved roads to 15 miles per hour (mph). • Minimize idling time for all engines by shutting engines when not in use or limiting idling time to a maximum of five minutes. Provide clear signage for construction workers at all access points. • Properly tune and maintain construction equipment in accordance with manufacturer's specifications. Check all equipment against a certified visible emissions calculator. • Post a publicly visible sign with the telephone number and name of the person to contact regarding dust complaints and the BAAQMD telephone number. The contact person shall implement corrective measures, as needed, within 48 hours, and the BAAQMD shall be informed of any legitimate complaints received to verify compliance with applicable regulations.					

• Limit simultaneous occurrence of excavation, grading, and ground-disturbing construction activities. • Minimize idling time of diesel-powered construction vehicles to two minutes. • All contractors use equipment that meets CARB's most recent certification standard for off-road heavy-duty diesel engines.					
Impact 4.3-c Would the project expose sensitive receptors to substantial pollutant concentrations?					
AQ-1 (see Impact 4.3-b for mitigation)					
BIOLOGICAL RESOURCES					
Impact 4.4-a Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?					
BIO-1: Worker Environmental Awareness Program (WEAP) A worker environmental awareness program (WEAP) biological resources module will be conducted for onsite construction personnel prior to the start of construction activities. The module will explain all the measures developed to prevent impacts on special-status species, including Western burrowing owl and golden eagle, and nesting birds. The module will also include a description of special-status species and their habitat needs, as well as an explanation of the status of these species and their protection under Endangered Species Act, California Endangered Species Act, and other statutes. A brochure will be provided with color photos of sensitive	Prepare the worker environmental awareness program and brochure and submit for review and approval to City of San José Director of Planning, Building and Code Enforcement or Director's designee and the Santa Clara Valley Habitat Agency	At least 30 days before any construction activities a copy of the WEAP module and brochure shall be approved. Conduct WEAP prior to any construction activities (ie Prior to issuance of grading, demolition or building permits, whichever occurs first.)	City of San José Director of Planning, Building and Code Enforcement or Director's designee and the Santa Clara Valley Habitat Agency	Review and approve worker environmental awareness program and brochure at least 30 days before the start of any construction activities. Conduct WEAP training for all onsite construction personnel prior to the start of any construction activities.	At least 30 days before the start of any construction activities Prior to any construction activities (ie Prior to issuance of grading, demolition or building

species, as well as a discussion of any permit measures. A copy of this WEAP program and brochure shall be provided for review and approval to Director or Director's designee with the City of San José Department of Planning, Building and Code Enforcement and the Santa Clara Valley Habitat Agency at least 30 days prior to the start of construction. This includes the following measures: • Environmental Inspector: A qualified Environmental Inspector shall verify implementation and compliance with all mitigation measures. The Environmental Inspector shall have the authority to stop work or determine alternative work practices where safe to do so, as appropriate, if construction activities are likely to affect sensitive biological resources. • Litter and Trash Management: Food scraps, wrappers, food containers, cans, bottles, and other trash from the project area shall be deposited into closed trash containers. Trash containers shall be removed from the project work areas at the end of each working day unless located in an existing substation, potential staging area, or the switching station site. • Parking: Vehicles and equipment shall be parked on pavement, existing roads, and previously disturbed or developed areas, or work areas as identified in this document.					permits, whichever occurs first.)

• Work Areas, Staging Areas: Work, staging, vehicle parking, and equipment parking areas shall be contained within the final areas that are negotiated with the relevant property owners, or as noted above. • Pets and Firearms: No pets or firearms shall be permitted at the project site.					
BIO-2: Burrowing Owl Surveys, Monitoring, Prevention and Relocation **Part A:** The project applicant shall conduct preconstruction surveys to ascertain whether burrowing owls occupy burrows on the site and along the utility alignments offsite prior to construction. The preconstruction surveys shall be performed by a qualified biologist and shall consist of a minimum of two surveys, with the first survey no more than 14 days prior to initial construction activities (i.e. vegetation removal, grading, excavation, etc.) and the second survey conducted no more than 2 days prior to initial construction activities. If no burrowing owls or fresh sign of burrowing owls are observed during preconstruction surveys, construction may continue. However, if a burrowing owl is observed during these surveys, occupied burrows shall be identified by the monitoring biologist and a buffer shall be established, as follows:	Conduct preconstruction surveys by a qualified biologist to ascertain whether burrowing owls occupy burrows on the site and along the utility alignments offsite	First survey no more than 14 days prior to initial construction activities (i.e. vegetation removal, grading, excavation, etc.) and the second survey conducted no more than 2 days prior to initial construction activities.	City of San José Director of Planning, Building and Code Enforcement or Director's designee	Submit results of preconstruction surveys by a qualified biologist to City of San José Director of Planning, Building and Code Enforcement or Director's designee and the San Clara Valley Habitat Agency.	Submit results of preconstruction survey no more than 14 days prior to issuance of any tree removal, grading, demolition or building permit issuance
	If a burrowing owl is observed during these surveys, occupied burrows shall be identified by the monitoring biologist and a 250ft buffer shall be established around all burrowing owl nests found. Monitoring of nesting behavior shall begin as soon as an occupied nest is found. If biologist determines that the nest is vacant, the non-disturbance buffer zone may	During surveys	City of San José Director of Planning, Building and Code Enforcement or Director's designee and the Santa Clara Valley Habitat Agency	Provide evidence to City of San José Director of Planning, Building and Code Enforcement or Director's designee as well as to the Santa Clara Valley Habitat Agency of buffer established.	Establish buffer immediately and start monitoring. Report within 24 hours of detecting an occupied burrow. Removal of vacant nest may only happen after

• If an active nest is found, a qualified biologist shall study nesting behavior and shall establish at a minimum a 250-foot non-disturbance buffer around all nest sites, based on stress response of the birds and the 2012 Staff Report (CDFW 2012). If the biologist determines that the nest is vacant, the non-disturbance buffer zone may be removed, in accordance with measures described in the SCVHP. The biologist shall supervise hand excavation of the burrow to prevent reoccupation only after receiving approval from the wildlife agencies (CDFW and USFWS) in accordance with Chapter 6, Condition 15 of the SCVHP. • For permission to encroach within the nest buffer, (February 1st through August 31st), an Avoidance, Minimization, and Monitoring Plan shall be prepared and approved by the City and the wildlife agencies prior to such encroachment in accordance with Chapter 6 of the SCVHP. An Avoidance, Minimization, and Monitoring Plan shall be prepared, provided to the agencies, and approved by the City Director of Planning, Building and Code Enforcement or their designee and the wildlife agencies prior to nest	be removed, in accordance with measures described in the SCVHP. An Avoidance, Minimization, and Monitoring Plan shall be prepared and provided to the Santa Clara Valley Habitat Agency Establish a 250-foot buffer if a burrowing owl is located during the non-breeding season (September through January).	Prior to nest encroachment in accordance with Chapter 6 of the SCVHP. (During February 1 through August 31) During non-breeding season (September through January)	City of San José Director of Planning, Building and Code Enforcement or Director's designee and the Santa Clara Valley Habitat Agency City of San José Director of Planning, Building and Code Enforcement or Director's designee and the Santa Clara Valley Habitat Agency	Approve Avoidance, Minimization and Monitoring Plan. Provide buffer and construction contracts to City of San José Director of Planning, Building and Code Enforcement or Director's designee of buffer established, and construction activities	approval from CDFW and USFWS in accordance with Chapter 6 of the SCVHP. Prior to issuance of any tree removal, grading, demolition, or building permit that results in nest encroachment in accordance with Chapter 6 of the SCVHP. Establish buffer immediately and stop construction within buffer or immediately follow avoidance measures. Report within 24 hours of detecting an

encroachment in accordance with Chapter 6 of the SCVHP. **Part B:** Should a burrowing owl be located during the non-breeding season (September through January), a 250-foot buffer shall be established, and construction activities shall not be allowed within the 250-foot buffer of the active burrow(s) used by any burrowing owl unless the following avoidance measures are adhered to: • A qualified biologist shall monitor the owls for at least 3 days prior to construction to determine baseline foraging behavior (i.e., behavior without construction). • The same qualified biologist shall monitor the owls during construction. If the biologist determines there is a change in owl nesting and foraging behavior as a result of construction activities, these activities shall cease within the 250-foot buffer. • If the owls are gone from the burrows for at least 1 week, the project applicant may request approval from the habitat agency to excavate all usable burrows within the proposed project area to prevent owls from reoccupying the site. After all usable burrows are excavated, the buffer zone shall be removed, and construction may continue.	Request approval from the Santa Clara Valley Habitat agency to excavate usable, unoccupied burrows within the project site during the non-breeding season. Request approval from the Santa Clara Valley Habitat agency to engage in passive relocation of burrowing owls in the event voluntary relocation of owls does not occur	During non-breeding season (if owls are gone from burrows for 1 week). During non-breeding season (if owls have not vacated the site for 10 or more consecutive days).	Santa Clara Valley Habitat Agency and City of San José Director of Planning, Building and Code Enforcement or Director's designee Santa Clara Valley Habitat Agency and City of San José Director of Planning, Building and Code Enforcement or Director's designee	prohibited within buffer unless avoidance measures specified are adhered to. Submit Santa Clara Valley Habitat Agency approval to City of San José Director of Planning, Building and Code Enforcement or Director's designee Submit Santa Clara Valley Habitat Agency approval to City of San José Director of Planning, Building and Code Enforcement or Director's designee	occupied burrow. Prior to issuance of any tree removal, grading, demolition, or building permit that would result in evacuation of usable unoccupied burrows. Prior to passive relocation of burrowing owls, or any activities that might affect relocation of owls.

The project owner shall request approval from the Santa Clara Valley Habitat agency to excavate usable, unoccupied burrows within the project site during the non-breeding season. **Part C:** In the event the voluntary relocation of site burrowing owls does not occur (defined as owls having vacated the site for 10 or more consecutive days), the project applicant can request permission to engage in passive relocation during the non-breeding season through the standard SCVHP application process (Section 6.8 of the SCVHP). If passive relocation is granted, additional measures may be required by the Habitat Agency. • If the owls voluntarily vacate the site for 10 or more consecutive days, as documented by a qualified biologist, the project applicant could seek permission from the Santa Clara Valley Habitat Agency to have the qualified biologist take measures to collapse vacated and other suitable burrows to confirm that owls do not recolonize the site, in accordance with the SCVHP, by preparing a written request and submitting supporting documentation to the City Director or their designee.					

BIO-3: Nesting Bird Avoidance and Minimization Measures The project applicant shall schedule demolition and construction activities, **if at all feasible**, to avoid the nesting season. The nesting season for most birds, including most raptors in the San Francisco Bay area, extends from February 1st through August 31st (inclusive). If any construction or demolition activities, including tree or vegetation removal or ground disturbance, occurs during the nesting season (February 1 through August 31), the project applicant shall adhere to the following guidelines: • The project applicant shall submit the resume of an ornithologist or other qualified biologist (with at least a bachelor's degree in a biological science field and demonstrated field expertise in avian species) for approval by the City of San José. • The pre-approved ornithologist or other qualified biologist (Designated Biologist, DB) shall conduct at least two pre-construction nest survey(s). The two pre-construction surveys shall be separated by a minimum 11-day interval and conducted no more than 14 days prior to initiation of any construction activity. One survey shall be conducted within the 3-day period	Construction, if at all feasible, shall be avoided during the nesting bird season.	Non-nesting bird season (ie September through January)	Project owner	Approval by City of San José Director of Planning, Building and Code Enforcement or Director's designee	Schedule construction activities for September through January.
	If any construction or demolition activities occurs during the nesting season, a qualified and approved biologist shall conduct two pre-construction surveys for nesting migratory birds onsite and offsite facilities and within 500 feet (for raptors) of the project boundary, where accessible.	If construction is going to occur during nesting bird season (ie February 1 through August 31). The surveys shall be separated by a minimum 11-day interval and conducted no more than 14 days prior to initiation of any construction activity. One survey shall be conducted within the 3-day period preceding initiation of construction activity.	City of San José Director of Planning, Building and Code Enforcement or Director's designee.	Submit results of preconstruction surveys by a qualified biologist to City of San José Director of Planning, Building and Code Enforcement or Director's designee and the San Jose Valley Habitat Agency.	Submit results of preconstruction survey no more than 14 days prior to issuance of any tree removal, grading, demolition or building permit issuance
	If a nesting bird is detected, an appropriate construction-free buffer shall be established in consultation with the California Department of Fish and Wildlife (CDFW) and the	Upon detection of a nesting migratory bird	City of San José Director of Planning, Building or Code Enforcement or Director's designee	California Department of Fish and Wildlife and the Santa Clara Valley Habitat Agency and City of San José Director of	Buffers shall be established immediately upon detecting an active nest.

preceding initiation of construction activity. Additional follow-up surveys may be required if periods of construction inactivity exceed two weeks in any given area, an interval during which birds may establish a nesting territory and initiate egg laying and incubation.	Santa Clara Valley Habitat Agency. All other directives on buffer zones shall be adhered to.			Planning, Building or Code Enforcement or Director's designee	
• Surveys shall cover all potential nesting habitat and substrate within the project site and any offsite facilities (i.e., electrical transmission line, staging area, employee parking) and publicly accessible areas within 500 feet of the project boundary. Any habitat areas adjacent to the project site but not publicly accessible shall be surveyed with binoculars. These surveys shall include the orders Falconiformes and Strigiformes (raptors and owls). Surveys shall be conducted at appropriate nesting times and concentrate on potential roosting or perch sites.	Project biologist to monitor the buffer to verify compliance bi-weekly. All other directives on monitoring shall be adhered to.	Bi-weekly until nestlings have fledged or nests are no longer active.	City of San José Director of Planning, Building or Code Enforcement or Director's designee	City of San José Director of Planning, Building or Code Enforcement or Director's designee	Monitoring shall begin immediately upon establishing an active nest.
• If active nests are detected during on-site surveys, a no-disturbance buffer zone (protected area surrounding the nest) shall be established around each nest with fencing, flagging and/or signage, as appropriate. Initially each nest will have the following buffer zone: 150 feet for any migratory bird nests, 250 feet for any raptor and owl nests (including burrowing owl), and 500	If active nests of special-status species are detected during pre-construction surveys or during project construction, the Director or their designee for the City of San José's Department of Planning, Building and Code Enforcement shall be notified within 24 hours. A letter through email may be used initially and shall state how impacts of any nesting birds will be avoided by citing the appropriate information from this mitigation measure. The final notification shall include all the reporting elements as described in **BIO-4**. This guideline shall also apply to	During pre-construction surveys or during project construction.	City of San José Director of Planning, Building or Code Enforcement or Director's designee	California Department of Fish and Wildlife and the Santa Clara Valley Habitat Agency and City of San José Director of Planning, Building or Code Enforcement or Director's designee	Notify within 24 hours of discovering active nest of special-status species (or any new nest found after pre-construction survey and during construction.)

feet for any special status species. Ultimately, the size of each buffer zone shall be determined by the Designated Biologist in consultation with the California Department of Fish and Wildlife (CDFW) and the Santa Clara Valley Habitat Agency. Collaboration to determine the appropriate buffer size for each nest found should be based upon the species, topography, behavior of the nesting birds, and type of activity that would occur in the vicinity of the nest. Once the buffer zone is established, other than the DB adjusting the buffer zone, it shall remain undisturbed and no construction activities, as defined above, shall occur within the buffer zone the DB and City of San José verifies that the nest(s) are no longer active. • If active nests are detected during the surveys, the DB shall monitor the nest weekly (at least once a week for special status species) until the DB determines that nestlings have fledged and dispersed, or the nest is no longer active. This applies to both onsite and offsite nests. If signs of disturbance or distress are observed, the DB shall immediately implement adaptive measures to reduce disturbance. These measures may include, but are not limited to,	any new nests discovered during project construction. All other guidelines in **BIO-3** that are applicable shall be followed.				

increasing buffer size, halting disruptive construction activities in the vicinity of the nest until fledging is confirmed, or placement of visual screens or sound-dampening structures between the nest and construction activity, where possible. The DB shall have sole authority not only to order the cessation of nearby project activities, but also when to resume project activities based upon the observed behavior of the nesting pairs and whether the nesting pairs continue to exhibit signs of distress. • If active nests of special-status species are detected during pre-construction surveys or during project construction, the Director or their designee for the City of San José's Department of Planning, Building and Code Enforcement shall be notified within 24 hours. A letter through email may be used initially and shall state how impacts of any nesting birds will be avoided by citing the appropriate information from this mitigation measure. The final notification shall include all the reporting elements as described below. This guideline shall also apply to any new nests discovered during project construction. All other guidelines above shall be followed.					
BIO-4: Avian Reporting and Avian Protection Plan	Designated biologist shall prepare reports summarizing	Pre-Construction: Submit no more than	City of San José Director of	California Department of	Submit Avian Protection Plan

The designated biologist shall be responsible for preparing the pre-construction nest survey reports (including the burrowing owl survey report per **BIO-2**). The report(s) shall include the time, date, methods, and duration of the surveys; identity and qualifications of the surveyor(s); and a list of species observed. If active nests are detected during the surveys, the reports shall also include a map made using GPS technology or aerial photo identifying the location of the nest(s), species, and a depiction of the boundary of the no-disturbance buffer zone around the nest(s). As new nests are discovered during construction, or buffer zones are adjusted, this map of bird nests should be updated. Inactive nests should be indicated by color in order to more visually comprehend where active nests are located. A compilation shall be made of the pre-construction nest survey reports, including a summary of all the guidelines contained in **BIO-2** and **BIO-3**. This compilation, known as the Avian Protection Plan, shall be submitted to the Director or their designee for the City of San José's Department of Planning, Building and Code Enforcement prior to any construction activities for review and approval.	the results of the preconstruction surveys for BIO-2 and BIO-3. Reports shall include survey result details specified. All active nests shall be mapped with GPS technology (as specified), and updated as applicable during construction. The designated biologist will compile **BIO-2** and **BIO-3** survey result reports with the addition of all other guidelines of these measures and present them as the Avian Protection Plan for approval.	14 days prior to issuance of any tree removal, grading, demolition or building permit issuance And On-going during construction	Planning, Building or Code Enforcement or Director's designee	Fish and Wildlife and the Santa Clara Valley Habitat Agency and City of San José Director of Planning, Building or Code Enforcement or Director's designee	(ie compilation of **BIO-2** and **BIO-3** reports of preconstruction surveys as well as all other guidelines) no more than 14 days prior to issuance of any tree removal, grading, demolition or building permit issuance

BIO-5: Non-Point Source Nitrogen Deposition Fee Pursuant to the 2012 Santa Clara Valley Habitat Plan (SCVHP) (Chapter 6 and Section 9, Table 9-7b), prior to any ground disturbance, a one-time fee payment for new daily vehicle trips shall be paid for mobile emission sources, as based on the appropriate fees and worksheet (year current to construction) in the 2022 SCVHA, or most recent Nitrogen Deposition Fee Worksheet. Fees are paid to the Santa Clara Valley Habitat Agency.	Project owner shall pay a one-time fee for mobile nitrogen emissions, pursuant to 2012 SCVHP.	Prior to issuance of any tree removal, grading, demolition, or building permits, whichever occurs first.	City of San José Director of Planning, Building or Code Enforcement or Director's designee and Santa Clara Valley Habitat Agency	Project owner shall pay the fee to Santa Clara Valley Habitat Agency and notify the City of San José Director of Planning, Building or Code Enforcement or Director's designee proof of payment to SCVHA.	Prior to issuance of any tree removal, grading, demolition, or building permits, whichever occurs first.
Impact 4.4-f Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?					
BIO-2 and **BIO-5** (see Impact 4.4a for mitigation)					
CULTURAL AND TRIBAL CULTURAL RESOURCES					
Impact 4.5-a Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?					
CUL-1: Prior to the commencement of construction, the applicant will secure the services of qualified archaeological specialists and Native American monitors. These specialists and monitors will prepare a workforce environmental awareness program (WEAP) to instruct construction workers of the obligation to protect and preserve valuable	Submit the qualifications of archaeological specialists and Native American monitors to the Director or Director's designee of the City of San José Department of Planning, Building and Code Enforcement for review and approval.	Prior to issuance of any tree removal, grading, demolition, or building permits, whichever occurs first.	City of San José Director of Planning, Building and Code Enforcement or Director's designee	Review and approve the qualifications of archaeological specialists and Native American monitors	Prior to issuance of any tree removal, grading, demolition, or building permits, whichever occurs first.

archaeological and Native American resources for review and approval by the Director or Director's designee of the City of San José Department of Planning, Building and Code Enforcement (PBCE). This program will be provided to all construction workers via a recorded presentation and will include a discussion of applicable laws and penalties under the laws; samples or visual aids of resources that could be encountered in the project vicinity; instructions regarding the need to halt work in the vicinity of any potential archaeological and Native American resources encountered; and measures to notify their supervisor, the applicant, and the specialists. Submit the qualifications of archaeological specialists and Native American monitors, as well as an electronic copy of the WEAP to the Director or Director's designee of the City of San José PBCE for review and approval. The applicant will secure the services of a Native American monitor and archaeologist to observe excavations of native soil. 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.	The qualified archaeological specialists and Native American monitors shall prepare a WEAP and submit an electronic copy to the City of San José Director of Planning, Building and Code Enforcement or Director's designee for review and approval.	Prior to issuance of any tree removal, grading, demolition, or building permits, whichever occurs first.	City of San José Director of Planning, Building and Code Enforcement or Director's designee	Review and approve the Workforce Environmental Awareness Program	Prior to issuance of any tree removal, grading, demolition, or building permits, whichever occurs first.

• 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 of 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.					

CUL-2: If archaeological resources are encountered during excavation or grading of the site, all activity within a 50-foot radius of the find shall be stopped, the Director or Director's designee of the City of San José Department of Planning, Building and Code Enforcement (PBCE) shall be notified, and a qualified archaeologist will examine the find. The archaeologist will evaluate the find to determine if they meet the definition of a historical, unique archaeological, or tribal cultural resource and make appropriate recommendations regarding the disposition of such finds prior to issuance of building permits for any construction occurring within the above-referenced 50-foot radius. If the finds do not meet the definition of a historical, unique archaeological, or tribal cultural resource, no further study or protection is necessary prior to project implementation. If the find does meet the definition of a historical, unique archaeological, or tribal cultural resource, then it will be avoided by project	All construction activity will stop within 50-feet of an archaeological discovery, the City of San José Director of Planning, Building and Code Enforcement or Director's designee will be notified, and a qualified archaeologist will inspect the find.	During the construction phase.	City of San José Director of Planning, Building and Code Enforcement or Director's designee	Review and approve the recommendation(s) of the qualified archaeologist.	During the construction phase.

activities. If avoidance is not feasible, adverse effects to such resources will be mitigated in accordance with the recommendations of the archaeologist. Recommendations will include collection, recordation, and analysis of any significant cultural materials. A report of findings documenting any data recovery shall be submitted to the Director or Director's designee of the City of San José Department of PBCE, NAHC (tribal cultural resources), and the Northwest Information Center. The project applicant will ensure that construction personnel do not collect or move any cultural material and will ensure that any fill soils that may be used for construction purposes does not contain any archaeological materials.	Based on the recommendation(s) of the qualified archaeologist, if the find does not meet the definition of a historical, unique archaeological, or tribal cultural resource, no further study or protection measures are necessary. If the find does meet the definition of a historical, unique archaeological, or tribal cultural resource, then it will be avoided. If avoidance is not feasible, then mitigation per the recommendations of the qualified archaeologist will be implemented.	During the construction phase.	City of San José Director of Planning, Building and Code Enforcement or Director's designee	Authorize construction to resume in the vicinity of the find if the find does not meet the definition of a historical, unique archaeological, or tribal cultural resources. If the find does meet the definition of a historical, unique archaeological, or tribal cultural resource and cannot be avoided, review and authorize implementation of a treatment/ mitigation plan and authorize construction to resume in the vicinity of the find.	During the construction phase.
CUL-3: If human remains are discovered during excavation or grading of the site, all activity within a 50-foot radius of the find will be stopped. The Santa Clara County Coroner shall be notified immediately and will make a	All construction activity will stop within 50-feet of the discovery of human remains, the Santa Clara County Coroner and City of San José Director of Planning, Building	During the construction phase.	City of San José Director of Planning, Building and Code Enforcement or	Authorize implementation of the treatment plan based on the recommendations of the MLD, if the	During the construction phase.

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 shall notify the Native American Heritage Commission (NAHC) within 24 hours of the identification. Once the NAHC identifies the most likely descendant(s) (MLD), the descendant(s) will make recommendations regarding proper burial (including the treatment of grave goods), which will be implemented in accordance with section 15064.5(e) of the California Code of Regulations, Title 14. The archaeologist will recover scientifically valuable information, as appropriate and in accordance with the recommendations of the MLD. A report of findings documenting any data recovery shall be submitted to the Director or Director's designee of the City of San José Department of Planning, Building and Code Enforcement (PBCE) and the Northwest Information Center.	and Code Enforcement or Director's designee will be notified immediately.		Director's designee	remains are determined to be of Native American origin. Authorize construction to resume in the vicinity of the find.	
Impact 4.5-b Would the project cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5?					
CUL-1 through **CUL-3** (See impact 4.5-a for mitigation)					
Impact 4.5-c Would the project disturb any human remains, including those interred outside of formal cemeteries?					
CUL-1 through **CUL-3** (See impact 4.5-a for mitigation)					
Impact 4.5-e Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial					

evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?					
CUL-1 through **CUL-3** (See impact 4.5-a for mitigation)					
GEOLOGY AND SOILS (PALEONTOLOGY)					
Impact 4.7-f Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?					
GEO-1: • The applicant shall secure the services of a qualified professional paleontologist, as defined by the Society of Vertebrate Paleontology, to be on-call prior to the commencement of construction. The paleontologist shall be experienced in teaching non-specialists to recognize fossil materials and how to notify in the event of encountering a suspected fossil. If suspected fossils are encountered during construction, the construction workers shall halt construction within 50 feet of any potential fossil find and notify the paleontologist, who shall evaluate its significance. • If a fossil is encountered and determined 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 the immediate area shall be halted or diverted to allow recovery of fossil remains in a timely manner. Fossil remains	Secure services of an on-call qualified professional paleontologist, as defined by the Society of Vertebrate Paleontology have been secured. If suspected fossils are encountered during construction, the construction workers shall halt construction within 50 feet of any potential fossil find and notify the qualified professional paleontologist, who will evaluate its significance	As soon as suspected fossils are encountered and determined to be significant and avoidance is not feasible, the paleontologist shall develop and implement an excavation and salvage plan. Following salvage, the paleontologist will prepare a paleontological resource monitoring report that includes findings and a record of the disposition of significant fossil finds	Paleontological Resource Monitoring Report: City of San José Director of Planning, Building and Code Enforcement or Director's designee	Review and approve the paleontological resource monitoring report and confirm disposition of significant fossil finds.	Prior to completion of construction.
	The qualified paleontological specialist will prepare a Worker Environmental Awareness Program	Prior to the commencement of construction	City of San José Director of Planning, Building and Code Enforcement or Director's designee	Review and approve the Worker Environmental Awareness Program	Prior to the commencement of construction

collected shall be cleaned, repaired, sorted, and cataloged, along with copies of all pertinent field notes, photos, and maps. • The paleontologist shall prepare a paleontological resource monitoring report that outlines the results of the monitoring program and any encountered fossils. The report shall be submitted to the Director, or Director's designee, of the City of San José Department of Planning, Building & Code Enforcement (PBCE) for review and approval. The report and any fossil remains collected shall be submitted to a scientific institution with paleontological collections. • Prior to the commencement of construction, the applicant shall secure the services of a qualified paleontological specialist. The specialist shall prepare a Worker Environmental Awareness Program to instruct site workers of the obligation to protect and preserve valuable paleontological resources for review by the Director, or Director's designee, of the City of San José PBCE. This program shall be provided to all construction workers via a recorded presentation and shall include a discussion of applicable laws and penalties under the laws; samples or visual aids of resources that could be encountered in the					

project vicinity; instructions regarding the need to halt work in the vicinity of any potential paleontological resources encountered; and measures to notify their supervisor, the applicant, and the specialists.					
GREENHOUSE GAS EMISSIONS					
Impact 4.8-a Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?					
GHG-1: The project owner shall use renewable diesel for 100 percent of total energy use by the emergency backup generators, and only use ultra-low sulfur diesel (ULSD) as a secondary fuel in the event of supply challenges or disruption in obtaining renewable diesel. The City of San José Planning, Building and Code Enforcement (PBCE) may grant temporary relief from the 100 percent renewable diesel requirement if the project owner can demonstrate a good faith effort to comply with the requirement and that compliance is not practical. The project owner shall provide an annual report of the status of procuring and using renewable diesel to the director, or director's designee, of the City of San José PBCE demonstrating compliance with the mitigation measure.	Provide documentation to the City of San José Director of Planning, Building and Code Enforcement or Director's designee to verify that renewable diesel is used for 100 percent of total energy use by the generators or demonstrate a good faith effort to comply with the requirement and that compliance is not practical.	Following commencement of project operation then annually for the life of the project.	City of San José Director of Planning, Building and Code Enforcement or Director's designee	Review documentation and verify the project is using renewable diesel	Following commencement of project operation then annually for the life of the project
Impact 4.8-b Would the project conflict with an applicable plan, policy or regulation adopted for the purpose or reducing the emissions of greenhouse gasses?					

GHG-2: The project owner shall participate in the San José Clean Energy (SJCE) at the Total Green level (i.e., 100 percent carbon-free electricity) for electricity accounts associated with the project, or enter into an electricity contract with SJCE or participate in a clean energy program that accomplishes the same goals of 100 percent carbon-free electricity as the SJCE Total Green Level, to ensure compliance with the city's 2030 Greenhouse Gas Emissions Reduction Strategy. During operation, the project owner shall provide documentation to the director, or director's designee, with the City of San José Planning, Building and Code Enforcement (PBCE) of initial enrollment and shall submit annual reports to the director, or director's designee, with the City of San José PCBE documenting either continued participation in SJCE at the Total Green level or documentation that alternative measures continue to provide 100 percent carbon-free electricity, as verified by an independent third-party auditor specializing in greenhouse gas emissions.	Provide documentation to the City of San José Director of Planning, Building and Code Enforcement or Director's designee of enrollment and annual reporting of continued participation in SJCE at the Total Green Level or documentation showing that alternative measures continue to provide 100 percent carbon-free electricity, as verified by an independent third-party auditor specializing in greenhouse gas emissions.	During operation	City of San José Director of Planning, Building and Code Enforcement or Director's designee	Review documentation and verify that the project is enrolled and continues to participate in SJCE at the Total Green to use 100 percent carbon free electricity, or alternative measure continue to provide 100 percent carbon-free electricity.	Upon commencing project operation and annually for the life of the project
HAZARDS AND HAZARDOUS MATERIALS					
Impact 4.9-d Would the project be located on a site that is included of a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?					
HAZ-1: Prior to issuance of demolition or grading permits, the project applicant shall prepare a Site Management Plan	Prepare and implement a SMP for the site. If contaminants exceeding applicable	Prior to start of and during construction	Santa Clara County Hazardous Materials	Provide Santa Clara County Hazardous	Prior to issuance of any grading,

(SMP) to guide activities during demolition, excavation, and initial construction to ensure that potentially contaminated soils are identified, characterized, removed, and disposed of properly. The purpose of the SMP is to establish appropriate management practices for handling impacted soil or other materials that may be encountered during construction activities. The SMP shall be implemented during project construction and shall include, but shall not be limited to, the following components: • A detailed discussion of the site background; • Description of soil testing, which shall include (but not be limited to) the collection of shallow soil samples (upper one-foot) and analyses for lead and organochlorine pesticides to verify presence of absence of unknown soil contamination. This soil profiling shall be performed prior to initiation of project construction. • Protocols for sampling of in-place soil to facilitate the profiling of the soil for appropriate off-site disposal or reuse, and for construction worker safety, dust mitigation during construction and potential exposure of contaminated soil to future users of the site prior to project construction.	screening levels are identified in initial soil testing the project owner shall submit the plans to Santa Clara County Hazardous Materials Compliance Division or the California Department of Toxic Substances Control, and the City of San José Director of Planning, Building and Code Enforcement or Director's designee and the City of San José Environmental Services Department Municipal Compliance Officer		Compliance Division or the California Department of Toxic Substances Control, City of San José Director of Planning, Building and Code Enforcement or Director's designee, and City of San José Environmental Services Department Municipal Compliance Officer	Materials Compliance Division or the California Department of Toxic Substances Control, City of San José Director of Planning, Building, and Code Enforcement or Director's designee and City of San José Environmental Services Department Municipal Compliance Officer verification of regulatory compliance for review and approval of SMP and regulatory compliance in the event of identification of contaminated soil or groundwater.	demolition, or building permit, whichever occurs first, and during handling and removal of any identified contaminated soil or groundwater.

• Procedures to be undertaken in the event that contamination is identified above action levels or previously unknown contamination is discovered prior to or during project construction; • Notification procedures if previously undiscovered significantly impacted soil or free fuel product is encountered during construction; • Onsite petroleum contaminated soil reuse guidelines based on the California Regional Water Quality Control Board (RWQCB), San Francisco Bay Region's reuse policy; • Sampling and laboratory analyses of excess soil requiring disposal at an appropriate off-site waste disposal facility; • Procedures and protocols for the safe storage, stockpiling, and disposal of contaminated soils; and • Protocols to manage groundwater that may be encountered during trenching or subsurface excavation activities. If there are no contaminants identified on the project site that exceed applicable screening levels for construction workers and residential users published by the RWQCB, California Department of Toxic Substances Control (DTSC), or Environmental Protection Agency, the SMP does not need to be submitted to an					

oversight agency and instead only needs to be submitted to the City of San Jose prior to construction activities. If contaminants are identified at concentrations exceeding applicable screening levels, the project applicant shall obtain regulatory oversight from Santa Clara County Department of Environmental Health (SCCDEH) or the DTSC under a Site Cleanup Program. The SMP and planned remedial measures shall be reviewed and approved by the SCCDEH or DTSC. A copy of the SMP shall be submitted to the Supervising Environmental Planner of the Department of Planning, Building & Code Enforcement and the Supervising Environmental Compliance Officer in the City of San Jose's Environmental Services Department. Copies of the approved SMP shall be kept at the project site. Any contaminated soils identified by testing conducted in compliance with the SMP and found in concentrations above established thresholds shall either be removed and disposed of according to California Hazardous Waste Regulations or the contaminated portions of the site shall be capped beneath the planned development under the regulatory oversight of the Santa Clara County Hazardous Materials Compliance Division (HMCD) or the DTSC. Contaminated soil					

excavated from the site shall be hauled off-site and disposed of at a licensed hazardous materials disposal site.					
HAZ-2: All contractors and subcontractors at the project site shall develop a Health and Safety Plan (HSP) specific to their scope of work and based upon the known environmental conditions for the site prior to project construction. The HSP shall be prepared by an industrial hygienist. The HSP shall be approved by the Director or Director's designee with the City of San Jose Department of Planning, Building & Code Enforcement and the City of San Jose Environmental Services Department and implemented under the direction of a Site Safety and Health Officer. The HSP shall include, but shall not be limited to, the following elements, as applicable: • A description of potential health and safety hazards; • A description of applicable regulations and standards to be implement for the project site; • Provisions for personal protection and monitoring exposure to construction workers; • Education for workers in the proper use of personnel protection; • Provisions for Hazard Communication Standard (HAZCOM) worker training and education including information	Prepare and implement a HSP for the site and submit the plans to the City of San José Director of Planning, Building and Code Enforcement or Director's designee and the City of San José Environmental Services Department Municipal Compliance Officer.	Prior to the start of construction	City of San José Director of Planning, Building and Code Enforcement or Director's designee, and City of San José Environmental Services Department Municipal Compliance Officer.	Provide verification of City of San José Director of Planning, Building, and Code Enforcement or Director's designee and City of San José Environmental Services Department Municipal Compliance Officer review and approval of HSP.	Prior to issuance of any grading, demolition, or building permit, whichever occurs first.

about HAZCOM labeling, copies of Safety Data Sheets for any hazardous materials that may be used onsite; • Identification of worker, supervisor, and employer health and safety responsibilities; and • A description of emergency procedures and identification of responsible personnel to contact in event of an emergency. Include contact information for responsible personnel and other emergency contact numbers. Copies of the approved HSP shall be kept at the project site.					
NOISE					
Impact 4.13-a Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?					
NOI-1: Pursuant to General Plan Policy EC-1.7, a construction noise logistics plan shall be prepared that specifies hours of construction, noise and vibration minimization measures, posting or notification of construction schedules, and designation of a noise disturbance coordinator who would respond to neighborhood complaints will be required to be in place prior to the start of construction and implemented during construction to reduce noise impacts on neighboring residents and other uses. Project construction operations shall use best available noise suppression devices		During the entire project construction phase.	City of San José Director of Planning, Building and Code Enforcement or Director's designee	Receive the notification that all adjacent businesses and other noise-sensitive land uses have been notified of construction schedule.	Prior to the start of construction
	Notify all adjacent business and other noise-sensitive land uses of the construction schedule, in writing, and provide a written schedule of "noisy" construction activities	Prior to the start of construction	City of San José Director of Planning, Building and Code Enforcement or	Receive disturbance coordinator contact information.	Prior to the start of construction

and techniques including, but not limited to the following: • Limit construction hours to between 7:00 AM and 7:00 PM, Monday through Friday, with no construction on national holidays, unless permission is granted with a development permit or other planning approval. No construction activities are permitted on the weekends at sites within 500 feet of a residence. Construction outside of these hours may be approved through a development permit based on a site-specific "construction noise mitigation plan" and a finding by the Director of PBCE that the construction noise mitigation plan is adequate to prevent noise disturbance of affected residential uses. • Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment. • Prohibit unnecessary idling of internal combustion engines. • Locate stationary noise-generating equipment such as air compressors or portable power generators as far as possible from sensitive receptors. Construct temporary noise barriers to screen stationary noise-generating	to the adjacent land uses. Then, notify the city that this action has been taken. Appoint a noise control disturbance coordinator and notify the city of the coordinator's contact information.		Director's designee		

equipment when located near adjoining sensitive land uses. • Utilize "quiet" air compressors and other stationary noise sources where technology exists. • Control noise from construction workers' radios to a point where they are not audible at existing residences bordering the project site. • Notify all adjacent business, residences, and other noise-sensitive land uses of the construction schedule, in writing, and provide a written schedule of "noisy" construction activities to adjacent land uses and nearby residences. • If complaints are received or excessive noise levels cannot be reduced using the measures above, erect a temporary noise control blanket barrier along surrounding building facades that face the construction sites. • Designate a "disturbance coordinator" who would be responsible for responding to any complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint (e.g., bad muffler, etc.) and will require that reasonable measures be implemented to current the problem. Conspicuously post a telephone number for the disturbance coordinator at the					

construction site and include it in the notice sent to neighbors regarding the construction schedule. Establish a telephone number for the disturbance coordinator and post it on the construction site.					
TRANSPORTATION					
Impact 4.17-b Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?					
TRANS-1: Prior to the issuance of a City of San José occupancy permit, the project shall implement the following: 1. Provide Pedestrian Network Improvements for Active Transportation (Tier 2): The project owner shall remove the pork-chop islands or provide raised crosswalks at the southwest and southeast corners of the Ringwood Avenue and Trade Zone Boulevard intersection. Improvements will require signal modification and coordination between the Cities of San José and Milpitas and VTA. 2. Provide Traffic Calming Measures (Tier 2): The project owner shall construct a raised median island for the existing left-turn pockets along the westbound Trade Zone Boulevard to improve pedestrian safety and access. These improvements will require coordination with the City of Milpitas and VTA.	Prepare and submit plans, specifications and estimates (PS&E) for review and approval for the Tier 2 Ringwood Avenue and Trade Zone Boulevard intersection improvements.	Prior to the issuance of a City of San José occupancy permit	City of San José Public Works	Review and approve PS&E.	Prior to the issuance of a City of San José Public Works occupancy permit.
3. Telecommuting and Alternative Work Schedules (Transportation Demand	Preparation of a Transportation Demand	Prior to the issuance of any City of San	City of San José Director of	Review and approve	Prior to the issuance of any

Management measure): The project owner shall require project employees to telecommute from home when possible, or to shift work schedules such that travel occurs outside of peak congestion periods and commute trips are reduced, thereby reducing vehicle miles travelled. At a minimum, the project owner shall require that 10 percent of employees work a 4/40 work week schedule (10-hour workdays for four days a week).	Management (TDM) plan that includes a requirement that at a minimum, the project owner shall require that 10 percent of employees work a 4/40 work week schedule (10-hour workdays for four days a week).	José Public Works occupancy permits.	Planning Department Planning, Building, and Code Enforcement or Director's designee	Transportation Demand Management plan.	City of San José Public Works occupancy permits.

Source: California Energy Commission. Draft Environmental Impact Report for the STACK Trade Zone Park. January 2023.

Appendix A

Project's Jurisdictional and Generating Capacity Analysis

Appendix A: Project's Jurisdictional and Generating Capacity Analysis

The STACK Trade Zone Park (would include 39 diesel-fueled standby emergency backup generators (gensets) that would provide emergency backup power supply for the project only during interruptions of electric service delivered by San José Clean Energy, via Pacific Gas and Electric (PG&E) transmission lines. The gensets would be electrically isolated from the PG&E electrical transmission system with no means to deliver electricity offsite of the project (the distribution line would only allow power to flow in one direction—from PG&E electrical transmission line to the project).

There are other STACK Infrastructure-owned data centers in the city of San José. The closest one, SVY01, is located on an adjacent parcel to the east (2001 Fortune Drive). There would be no common facilities between the project and this existing data center or any other STACK Infrastructure data center. Therefore, the project is considered an independent data center for the purpose of jurisdictional determination.

Out of the 39 gensets, 36 gensets would have a nameplate output capacity of 3.0 megawatt (MW), and the remaining three, designated admin/life safety gensets, would each have a capacity of 1 MW. The maximum total facility load requirements would not exceed 91 MW. This includes the critical information technology (IT) load of the servers and server bays, the cooling load of the IT servers and bays, and the facility's ancillary electrical and telecommunications equipment operating loads to support the data customers and campus.

The California Energy Commission (CEC) is responsible for reviewing, and ultimately approving or denying, all applications for thermal electric power plants that are 50 MW and greater being proposed for construction in California. (Pub. Resources Code, § 25500.) The CEC has a regulatory process, referred to as the Small Power Plant Exemption (SPPE) process, that allows applicants with projects between 50 and 100 MW to obtain an exemption from the CEC's jurisdiction and from obtaining a CEC certificate and instead proceed with local approval if the CEC finds that the proposed project would not create a substantial adverse impact on the environment or energy resources. (Pub. Resources Code, § 25541.)

The CEC staff (staff) calculated a net deliverable or useable electricity capacity of more than 50 MW and less than 100 MW from the project's gensets, qualifying it for a SPPE under the capacity criterion. The following provides a summary of the factors supporting this conclusion, with a more detailed discussion of these factors following after:

1. The diesel-fueled reciprocating engine gensets use a thermal energy source.
2. The gensets and the associated project equipment that they would support would all be located on a common property under common ownership sharing common

utilities, and the 39 gensets should be aggregated and considered as one thermal power generating facility with a generation capacity of greater than 50 MW.

3. While the project has an apparent installed generation capacity greater than 100 MW (36 gensets, each with 3.0 MW peak capacity, and three 1.0 MW admin/life safety genset), the "extra" MW installed are redundant. In no case would the maximum facility-wide load demand exceed 91 MW due to physical constraints built into the project.
4. Jurisdictional analyses are based on the net MWs that can be delivered for "use" (i.e., to a data center facility or the electricity grid), not the gross or nameplate rating. Unlike a traditional power plant supplying electricity to the grid, for a data center, the maximum load being served is determinative and not the combined net capacity of the installed gensets. Here, the maximum facility wide data center load requirement would be 91 MW.
5. The gensets would be exclusively connected to the data center buildings and would not be capable of delivering electricity to any off-site user or to the electrical transmission grid. The proposed redundancies built into the design of the facility are to ensure performance reliability, not to generate and supply the data center with more than 91 MW of electricity.
6. The restriction on the data center's load demand is hardwired through various control systems. It would be physically impossible for the gensets to generate more electricity than the buildings require. Excess electricity would damage components or at a minimum, isolate the project loads from the gensets.

To make a jurisdictional recommendation, staff assessed the generating capacity of the project, using the following:

1. SVY Backup Generating Facility is a thermal power plant under the statutory definition.

The Warren-Alquist State Energy Resources Conservation and Development Act (Public Resources Code, section 25000 et. seq) defines a thermal power plant "as any stationary or floating electrical generating facility using any source of thermal energy, with a generating capacity of 50 megawatts or more, and any facilities appurtenant thereto." (Pub. Resources Code, § 25120.) The backup generating facility's generation yard would be made up of gensets that use petroleum-based diesel engines to convert the thermal energy in the diesel fuel[1] into electricity via a rotating generator, and, thus, each genset is an electrical generating device that uses a source of thermal energy. The backup generating facility proposes to use 39 such gensets to service the data center.

[1] Diesel fuel is composed of a mixture of hydrocarbons, containing chemical energy. When ignited, this chemical energy is converted to thermal energy.

The backup generating facility's 39 gensets, and the associated data center that they would support, would all be located on a common property under common ownership sharing common utilities. The gensets would operate to provide backup electricity to the project when its connection to the grid is lost. The genset system configuration includes a 5-to-make-4 for building SVY05 and 7-to-make-6 for building SVY06, meaning that for every four and six gensets, for their respective building, that would support load in the event of a utility failure, there is one redundant genset. The 39 gensets would never operate simultaneously at 100 percent capacity. However, any genset can function either as a back-up to the grid or a back-up to the grid back-up gensets, so there is not a functional difference in the type of engine or generator between each genset. All of the gensets at the project would share a common trigger for operation during an emergency: the transfer switch isolating the backup generating facility from the grid. Thus, because the project is stationary, under common ownership sharing common utilities, uses a fuel source to generate thermal energy, and has a generating capacity of 91 MW, the project meets the statutory definition of a thermal power plant.

2. *California Code of Regulations, Title 20, section 2003 requires the generating capacity to be the net generating capacity.*

The data center would be installed during the initial construction of the project by the project owner, but there is no specific timeline proposed for when data center would need the full capacity of gensets; the exact timing of individual leases that fill server bay space is subject to the market decisions of disparate customers. Therefore, it may be years before the data center is at full load. Nevertheless, for purposes of this analysis, staff assumes full load will eventually be reached.

California Code of Regulations, Title 20, section 2003 specifies how the CEC calculates "generating capacity" for jurisdictional determinations, including the 50 MW threshold for the definition of a thermal power plant under Public Resources Code, section 25120. However, section 2003, which uses nameplate capacity in addition to consideration of other factors, only addresses steam and combustion turbines, not diesel-fueled gensets as used in the project, and is, therefore, not controlling here. There are also other reasons to conclude that simply focusing on nameplate capacity here is not appropriate.

For a typical power plant, outside the factors identified in California Code of Regulations, Title 20, section 2003, there is almost no limit on what might be generated and provided to the grid, so the approach outlined in that provision identifies the potential maximum generating capacity and is reasonable for those facilities. This is not the case with data centers, where producing more electricity than what the data center requires would be economically wasteful and likely result in damage to the facility.

In traditional turbine-based power plants, parasitic loads (fans, pumps, and heaters) are external to the turbine. Thus, the generating capacity is the total net MWs at the switchyard bus; that is, gross MWs less parasitic loads. If the grid "demands" more, the

power plant cannot deliver more electricity unless it burns fuel at a higher rate or reduces parasitic loads. Even then, equipment would have to have the physical capacity to burn more fuel and convert thermal energy into rotational energy, and then operate the generator at a higher output. The calculations assume normal conditions, where generation would be under average operating conditions, and assumes the onsite loads (often called parasitic loads) are also average (e.g., a filter backwash pumping load would not be included if that operation only occurs monthly or annually). Typically, at a traditional power plant, no redundant generating equipment is installed.[2] Generating capacity at a traditional power plant is determined based on the net capacity of all generators proposed to be installed and connected to the grid because there is almost no limitation on the amount of MWs the grid can "take" from the facility.

Typically, emergency backup generating facilities serving data centers are not physically able to send excess electricity to the grid, and all electricity generated must be absorbed by the data center itself. Data centers are designed with precise loads, assuming full build-out, and providing electricity more than these loads is not only economically wasteful (burning fuel for no benefit or reason) but can result in damage to the sensitive components located inside these data centers as well as to the heating, ventilation, air conditioning unit and other systems serving the buildings. Therefore, for purposes of evaluating the capacity of emergency backup generating facilities serving data centers, it is reasonable for staff to consider building loads to be the controlling factor in determining generating capacity.

3. *Data centers are analyzed differently than conventional power plant facilities for several reasons.*

To determine the net generating capacity of a collection of gensets[3] for data centers, the approach is slightly different but consistent with that used on a traditional power plant. The differences are: 1) the end user is the building and data servers, not the grid, and 2) extra gensets or generating capacity are installed to provide electricity not only for building and data server loads but to provide redundancy that achieves a statistical reliability that can be marketed to data customers.

Staff's approach is consistent with widely practiced standards. For example, American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE's) Energy

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2 At modern power plants, some equipment design includes 50 to 100 percent redundancy. The redundant equipment is generally limited to certain critical components like transformers, which are often custom items with long lead times for fabrication, or boiler water feed pumps, which are intended to protect the steam boiler components from damage from too much heat if circulating water flow is interrupted.

3 Backup generators, by definition, generally have the following characteristics: reliable starts, fast starting to full load, cheap to maintain as they sit idle most of the time, use cheap and stable fuel as the fuel sits unused most of the time, and use high-density fuels to limit storage volumes onsite so the project can operate if "islanded."

Standards for Data Centers do not use the nameplate or gross capacity but the net generating capacity of data centers, or the actual cooling and IT server loads.[4] These ASHRAE standards are performance-based as opposed to prescriptive standards, advocating the determination of load requirements be based on project-specific operational characteristics.

Staff's approach to calculating generating capacity has also been devised based on the International Organization for Standardization (ISO), which sets standards for different industries including the energy industry. The ISO standards are widely accepted by, and used throughout, the energy industry. Consistent with staff's method, the ISO specifies that generating capacity should be the net capacity at average annual ambient conditions.[5]

In the case of the project, the load served acts as a limit to the generation levels from the gensets. This factor is not present in a capacity generation determination for a typical power plant feeding to the grid because the grid does not act in the same way the "project grid" does. If the breakers between the data center building and the gensets were to trip due to excess generation, the data center would be isolated from the gensets, with the servers and building cooling forced to shut down. This subverts the intention of using the gensets to maintain reliable and high-quality electricity. Excess electricity would damage components or, at a minimum, isolate the load from the gensets. If the building cooling load were to increase (e.g., the day gets warmer), the gensets would open the engine fuel throttle to increase generation output and match demand but would still not exceed the combined 91 MW IT and building demand.

4. The project's capacity would not exceed 91 MW.

The exact number of gensets that could operate in an emergency depends on actual cooling and IT server loads and the reliability and performance of the gensets. In no case would the combined output of gensets exceed the prescribed maximum load of 91 MW. As explained above, it would be physically impossible for the gensets to generate more electricity than the buildings require. For purposes of testing and maintenance, only one genset would operate at any given time.

The maximum demand of 91 MW would be fixed by the specification and installation of electrical buses and panels, switchyard, and breakers that would have an upper electrical capacity limit. The cooling equipment's maximum demand would also be fixed by the specification and installation of equipment that have an upper physical limit of cooling capacity and would include some redundant cooling equipment. Such redundant equipment could only be operated if a primary component fails and could not be operated in addition to the primary components because that would damage the data center. The

4 American National Standards Institute (ANSI)/ASHRAE Standard 90.4-2016, www.ashrae.org.
5 ISO 3046-1 Reciprocating Internal Combustion Engines – Performance, www.iso.org/standards.

data center would be served from the grid or from the gensets with electricity that matches and does not exceed demand for the operations of the data server bays and buildings.

The heat rejected by the IT servers must be removed from each server bay or else the server equipment and data would be damaged. Any attempt to add more servers to a bay would result in direct, immediate, and dire consequences because the building and equipment would have been designed for an upper critical IT load. It is important to note that the maximum combined facility load of 91 MW is based on 100 percent critical IT load with maximum cooling on the hottest day. In actuality, the critical IT load and related cooling load would typically be less than this worst-case scenario.

In recent years, the power and energy industries have advanced in terms of software development and hardwired digital control to permanently limit generation capacity. The generation by backup generators would be regulated by each building and each bay in that building. Software would be used to operate the gensets in a manner that meets the bay and building demand. If the demand decreases (i.e., less mechanical load for cooling, etc.), the gensets sets would automatically adjust the loading and corresponding electrical output. If a genset or the software were to malfunction and attempt to generate more electricity than the building demand, individual electrical gensets controllers would shut down. The project would employ physical electronic devices and software technology that limit and monitor the data center's electrical load.

For the maximum generating capacity to increase, the project would have to be redesigned to physically fit more servers in a server bay or add more bays. The project owner would have to address the unplanned increase in electricity demand for normal operations because the existing electrical equipment would not be sized for the higher electricity throughput. Additionally, the project owner would have to install additional cooling equipment units to address the increased heat rejected by the server bays and buildings, and install additional redundant cooling equipment, additional uninterruptable power supply (UPS) battery units, and additional gensets to maintain the level of backup and reliability to match the new higher levels of load. This is an unlikely outcome because such changes are not trivial and would result in a cascade of design and physical changes to the facility.

When the data center is at full load, its worst-case day combined IT and building load[6] would not exceed 91 MW. The project proposes gensets that total more than 91 MW for purposes of redundancy. The combined generating capacity of the installed operational gensets is autonomously determined by the electrical equipment in the data center server bays and building equipment in use at the time of an emergency.

The project has been designed with two generation yards. Each generation yard would

6 Based on the hottest, most humid day of the year and with all IT servers in use at their full usage rate

consist of multiple, independent groups, with each group consisting of multiple gensets, including redundant gensets. Each generation yard would also include one admin/life safety genset. The emergency operation of each of the data center groups is fully automated. Once the data center loses connection to the local grid, the transfer switch isolates the data center from the local electrical transmission grid, and all the gensets assigned to a server bay set initiate startup. As the gensets start, synchronize, and take up load associated with their server bays and building equipment, the UPS system would provide full-load power for up to five minutes[7] to smoothly transition the data center customers' data servers from the grid to the gensets. If a genset or two fail to start or synchronize, the remaining genset in the 5-to-make-4 or 7-to-make-6 server bay ramp up to higher output levels. The output of the genset assigned to a server bay set match (meet but cannot exceed) the data center data customers' IT demand in the respective server bay and the server bay's heating, ventilation, air conditioning unit demand. The combined output of the server bay set is autonomously determined by the electrical equipment in the data center server bays and building equipment.

Combined output would be limited by sizing the electricity handling equipment to throttle transfer capacity to no more than 91 MW, which would prevent damage to IT servers and building equipment. Therefore, it would be physically impossible for the gensets to generate more electricity than what the data center would use, or more than 91 MW.

7 The gensets are expected to be on and synchronized within a minute or so, but the UPS can supply up to 5 minutes of power at 100 percent full-load UPS to ensure a complete transition from the grid to the gensets.

Appendix B

Project Substation and Pacific Gas and Electric Company Electrical Service Details

Appendix B: Project Substation, Pacific Gas and Electric Company Electrical Service Details, and Emergency Operations

This appendix includes a discussion of the Pacific Gas and Electric Company's (PG&E) electrical system reliability (including supporting information) and emergency operations.

Electrical System Reliability

Apart from readiness testing and maintenance, the backup generators are designed to operate only when the electric system is unable to provide power to the data center. To understand the potential for the backup generators to operate during emergencies, one needs to know the conditions under which the electric system is unable to provide power to the data center. There are essentially five conditions that might result in the operation of the backup generators:

1. A fault occurs (power supply interruption) or planned maintenance is required on the equipment interconnecting the data center to the PG&E grid and the data center's electricity needs cannot be met.
2. An outage or fault occurs on the utility transmission system and PG&E is unable to provide power to the data center.
3. A Public Safety Power Shutoff (PSPS) impacts the utility transmission system and the data center is not able to receive power from PG&E.
4. An energy shortage crisis similar to the one in late Summer 2020 and the most recent heat waves where the utility (e.g. PG&E) is unable to supply electricity to the data center or the data center operators voluntarily disconnect from the utility and relies on backup generators to provide the needed electricity.
5. The generators could also run when the utility/the California Independent System Operator (California ISO) calls for participants in the Base Interruptible Program (BIP) to reduce loads.

Due to the design of the data center interconnection with PG&E, the design of the PG&E transmission network, and the historical and expected impacts of PSPS, staff expects the backup generators would only be used in rare events outside of testing and maintenance and participation in the BIP program.

The proposed data center interconnection to PG&E includes redundant facilities that will allow the data center energy needs to be met without use of the backup generators even when maintenance is required on the transmission system. Thus, transformer or transmission line maintenance could be performed without interrupting the supply of electricity from PG&E.

The PG&E 115 kV Newark-Milpitas #2 line with approximately 0.25 mile would be extended to connect to the project substation. The substation is designed to include two 100 MVA (115/34.5 kV) step-down transformers when only one is required to supply the full loads of the data center.

The California ISO and PG&E are responsible for the reliability of the transmission network and are required to maintain compliance with national, regional, state and local standards. These standards are complicated but, generally speaking, they require that no loads be dropped, or customers shut off, when any single element of the bulk electric system is forced out of service. For the project, this means that PG&E should be able to supply power whenever any single part of the transmission system is out of service, sometimes called an N-1 or single contingency condition. This is the equivalent of, at a minimum, providing a looped system for the project.

Since 2007, the 115 kV Newark-Milpitas #2 line which proposed to interconnect to the project substation indicated there have been four outages of the 115 kV lines: two outages in 2007, one outage in 2008, and one outage in 2012. The outages occurred in 2007 with a collective outage duration of 84 minutes. The outage occurred in 2008 due to work procedure error was 29.5 hours. The outage that occurred in 2012 was 4.4 hours. None of the outages were due to PSPS events.

Wildfire policies could impact PG&E's ability to supply power to the project if curtailments on the transmission system interrupt supplies to both Newark Substation and the Milpitas Substation. A PSPS essentially de-energizes power lines in order to prevent the lines from causing or being damaged by wildfires. The PSPSs to date have been generally limited to high fire risk zones and only implemented under special conditions. A line de-energization in one of PG&E's high-risk fire zones to reduce the risk of lines causing a wildfire could reduce the electricity transmission access and supply to the project substation.

As indicated in the Supplemental Responses to Data Requests Set 1 and 2 - TZP, dated October 20, 2022, the STACK project site, the Newark and Milpitas substations are not located in High Fire Risk Area (HFRA). In addition, power serving the project would come from either the Newark or the Milpitas substations if either one the 115 kV line is out of service. It is unlikely that a PSPS event would result in both 115 kV lines being taken out of service.

The future impacts of safety shutoffs on the PG&E system are not currently known – to date, the most recent broadly implemented PSPSs in PG&E service territory had no impact on the Newark and the Milpitas substations. As the utilities and regulators try to balance the costs and benefits of PSPS by fine tuning and targeting the implementation, the mostly likely outcome is that future PSPS events will have even fewer potential effects on PG&E's territory.

CEC staff expects the project's backup generators to be required to supply data center

loads only rarely due to utility outages or certain onsite electrical equipment interruptions or failure. The PG&E system can supply power to the data center from both Newark and Milpitas substations 115 kV transmission lines. These interconnections make the energy supply to the data center at least as reliable as a looped system but likely even more reliable. Finally, PSPS events have not impacted customers directly connected to these two substations and as we expect the effects of PSPS events to decrease over time we do not think this will be an issue for the project going forward.

Energy shortages, like those that occurred on two occasions in 2020 and the recent heat waves, could prevent a utility from supplying the data center electricity needs and the data center would then rely on backup generators. Recently, the California Public Utilities Commission (CPUC) has adopted a new pilot program (D.21-03-056), currently in effect through 2025, which ordered PG&E, Southern California Edison and San Diego Gas and Electric to administer the Emergency Load Reduction Program (ELRP). Data centers could voluntarily participate in the ELRP and in the event of an energy shortage emergency, they would disconnect from the grid and use their on-site generators to supply electricity. The ELRP provides a mechanism for utilities to measure the load reduction and provide financial compensation to the participants. The ELRP does not affect the likelihood of emergency shortage events. The last time an energy shortage event occurred, like those in 2020, was 2001. If the past is indicative of future shortages, they are rare events. The project can participate in the ELRP even if they are in the BIP. The applicant would only be paid and counted for the load reductions in the ELRP beyond those committed to in the BIP. The SPPE application indicated that the project would not be operated to participate in load-shedding or Resource Adequacy demand response programs (DayZenLLC 2021a).

Emergency Operations

Historical Power Outage Frequency

This section reviews information on the likelihood of an interruption of the electrical supply that would trigger emergency operations of the project's standby generators.

Pursuant to CPUC requirements, PG&E annually publishes a review of its system reliability. In the report covering 2021[1], "major event days" contributed to extended durations of outages. Average customer outages were 588.3 minutes per customer (System Average Interruption Duration Index or SAIDI), which is the amount of time the average PG&E customer experienced a sustained outage or outages (being without power for more than five minutes). Outages were much shorter in the project area. When considering only the portion of PG&E's system within its San Jose Division, outages were 171.7 customer-

1 Pacific Gas and Electric Company, 2021 Annual Electric Reliability Report, dated July 15, 2022. Available online at: https://www.pge.com/pge_global/common/pdfs/outages/planning-and-preparedness/safety-and-preparedness/grid-reliability/electric-reliability-reports/CPUC-2021-Annual-Electric-Reliability-Report.pdf.

minutes (SAIDI). This indicates that San Jose area customers experience outages that are shorter in duration than the system-wide average. For the frequency of PG&E's customers experiencing outages in 2021 (shown as System Average Interruption Frequency Index or SAIFI), PG&E shows, on average, outages occurred 1.688 times in the year for all customer types. The transmission system index (0.192 SAIFI in 2021) demonstrates a much higher reliability for transmission service when compared with the combination of transmission and distribution system service.

BAAQMD's Review of Data Center Diesel Engine Operations

Scoping comments on the CA3 data center project from the Bay Area Air Quality Management District (BAAQMD) provided a review of data centers that initiated the operation of diesel engines for "non-testing/non-maintenance" purposes to inform staff's consideration of scenarios of emergency backup power generation operations beyond routine testing and maintenance (BAAQMD 2021b). BAAQMD's review covers a 13-month period (September 1, 2019, to September 30, 2020) that spans different types of emergency situations across California.

There were 66 data centers under the jurisdiction of BAAQMD. Staff at BAAQMD gathered information from 45 of those data center facilities. The attachment to BAAQMD's scoping comments on the CA3 data center project listed 20 facilities that reported some level of "non-testing/non-maintenance" diesel engine use in the 13-month period (CEC 2021).

The scope of BAAQMD's review can be summarized as follows:

a. Period covered: 13 months (9,504 hours)

b. Facilities (data centers) under BAAQMD jurisdiction: 66 data centers

c. Facilities from which information was collected: 45 data centers

d. Facilities responding with some "non-testing/non-maintenance" use: 20 data centers

e. Permitted engines at the 20 facilities responding: 288 engines

f. Installed generating capacity of engines at the 20 facilities responding: 686.5 MW

g. Information was not provided for the 25 facilities that did not report any non-testing/non-maintenance use or the other 21 facilities under BAAQMD's jurisdiction that were not surveyed in this data gathering effort.

BAAQMD normally issues permits for standby diesel generator engines, and the permit requires each owner or operator to maintain records of the number of operating hours for each "emergency" and the nature of the emergency. The types of events within BAAQMD's review period include a Governor-proclaimed state of emergency, other outages, power quality events, and human errors. The data shows that 75 percent of all engine-hours occurred either during the August 2020 Governor-proclaimed state of

emergency or the subsequent heat event in September 2020. Staff does not consider this a typical year, and the data is probably not representative or indicative of future years.

For the 20 data centers listed in BAAQMD's review, the total permitted and installed generating capacity of these facilities equals 686.5 MW, across 288 individual diesel engines. The total amount of "non-testing/non-maintenance" runtime of all these 288 engines amounted to approximately 1,877 engine-hours of operation.

Table B-1 summarizes the runtimes found by BAAQMD's review for each of the 20 data centers. BAAQMD's review identified one data center facility that ran diesel generators for approximately 400 hours for non-testing/non-maintenance purposes during this time period. **Table B-1** shows that this facility has over 40 individual engines permitted at the site for an average runtime of about 10 hours per engine. The different data centers within BAAQMD's review showed that nine of the 20 facilities responding had fewer than 50 hours of operating one or more diesel engines for non-testing/non-maintenance purposes.

TABLE B-1 BAAQMD'S REVIEW OF NON-TESTING/ NON-MAINTENANCE OPERATION (ENGINE-HOURS)

Data Center	# of Permitted Engines	# of Engines with Non-Testing/ Non-Maintenance Operations	Sum of Non-Testing/ Non-Maintenance Operations (Engine-Hours)	Average Hours of Operations per Engine Used
1	10	10	83	8.3
2	5	5	77	15.3
3	6	6	108	18.0
4	44	44	22	0.5
5	3	2	11	5.5
6	6	6	219	36.5
7	24	24	202	8.4
8	26	24	10	0.4
9	5	5	26	5.2
10	41	40	401	10.0
11	14	11	75	6.8
12	11	11	275	25.0
13	5	5	85	17.0
14	22	8	28	3.4
15	8	7	98	14.0
16	17	4	10	2.4
17	2	2	4	2.0
18	8	6	18	3.0
19	6	6	24	4.0
20	25	17	103	6.0
Total	**288**	**243**	**1,877**	**Max. 36.5**

Sources: BAAQMD 2021b, Energy Commission staff analysis of data from BAAQMD

From the runtimes of all the engines at all facilities in BAAQMD's review, **Table B-1** estimates that the average engine ran no more than 36.5 hours over the 13-month

period. Staff also found that no single engine within BAAQMD's review ran for more than 50 hours overall for "non-testing/non-maintenance" purposes.

Staff used the data in BAAQMD's review (BAAQMD 2021b) and a clarifying email of BAAQMD results (CEC 2021) to estimate the power production during "non-testing/non-maintenance" diesel engine use and found that approximately 1,575 MWh was generated during this 13-month (9,504 hour) period. The power generated by these engines presumably displaced grid service for the on-site data center facility electrical demand. Based on the installed generating capacity of 686.5 MW partially operating within the 13-month record, the engines in BAAQMD's review that did operate would have an extremely low capacity-factor of 0.024 percent [0.024 percent = 1,575 MWh / (686.5 MW * 9,504 hours)]. This capacity factor is only considering the facilities that had engines that ran during this 13-month period. Twenty-five of the 45 facilities reporting had zero hours of engine runtime.

Consideration of Extreme Events. California experienced different types of emergency situations within the 13-month period (September 1, 2019, to September 30, 2020) of BAAQMD's review. This period included the expansion of PG&E's PSPS program, severe wildfires, several California Independent System Operator (CAISO) declared emergencies, and winter storms. From August 14, to 19, 2020, California experienced excessive heat. On August 16, 2020, Governor Newsom proclaimed a state of emergency[2] because of the extreme heat wave in California and surrounding western states. This was a one in 30-year weather event that resulted in the first system-wide power outages California had seen in 20 years. In addition to the extreme heat wave in mid-August, high temperatures and high electricity demand occurred over the 2020 Labor Day weekend, especially on Sunday, September 6, and Monday, September 7, 2020 (CAISO 2021). Thus, the data set provided is not necessarily representative of an average 13-month period from which one could extrapolate average backup facility use into the future.

Table B-2 summarizes how these extreme events influenced the runtimes found by BAAQMD's review for each of the 20 data centers.

Table B-2 shows that most "non-testing/non-maintenance" diesel engine use identified by BAAQMD's review (over 1,400 engine-hours out of 1,877 engine-hours) occurred either during the August 2020 Governor-proclaimed state of emergency or the subsequent heat event in September. Excluding these extreme events results in 473.7 engine-hours of "non-testing/non-maintenance" diesel engine use during other dates, or fewer than two hours per engine for all 288 engines in the review. Out of the 20 data centers that ran engines for "non-testing/non-maintenance" purposes, the 473.7

2 https://www.gov.ca.gov/wp-content/uploads/2020/08/8.16.20-Extreme-Heat-Event-proclamation-text.pdf.

engine-hours of runtime outside of extreme events was spread across 10 data centers out of the 45 data centers covered by BAAQMD's review.

Similarly, staff estimates that over 50 percent of the overall power produced by the engines in BAAQMD's review (at least 843 MWh of 1,575 MWh) occurred during the Governor-proclaimed state of emergency, and another 25 percent of the power produced was attributable to unknown days in the period. Staff's analysis of actual power produced during each day of the 13-month record appears in **Table B-3**.

TABLE B-2 EXTREME EVENTS: NON-TESTING/NON-MAINTENANCE OPERATION (ENGINE-HOURS)

Data Center	Operations During August 2020 State of Emergency (Engine-Hours)	Operations During September 2020 Heat Event (Engine-Hours)	Other Dates of Operations (Engine-Hours)	Sum of Non-Testing/ Non-Maintenance Operations (Engine-Hours)
1	82.7			83
2			76.6	77
3	107.8			108
4	21.6			22
5	11.0			11
6	218.8			219
7	88.2	81.2	32.5	202
8			10.3	10
9	26.0			26
10	259.7		141.1	401
11	75.0			75
12	275.3			275
13			85.0	85
14	19.9		7.6	28
15			98.0	98
16			9.6	10
17			4.0	4
18	9.0		9.0	18
19	24.0			24
20	88.4	14.3		103
Total	**1,307.4**	**95.5**	**473.7**	**1,877**

Sources: BAAQMD 2021b, Energy Commission staff analysis of data from BAAQMD

Across all events, including the extreme event days within the period, **Table B-3** shows that the average engine loading in BAAQMD's review was below 40 percent. However, the data does not establish a typical type of operation that could be reasonably expected to occur during any emergency or any typical operational characteristics that could be

used in representative air quality modeling. For example, some engines in the data set ran at no load or with very low loads; one engine ran at no load for 41.7 hours while the highest engine load in the data set was 70 percent load. The range of engine loads and the fact that most engines operated at low loads demonstrates the difficulty in predicting the level of facility electrical demands that would need to be served by the engines during an emergency. This also demonstrates the difficulty in making an informed prediction of the engines' emission rates, which vary depending on load, in the event of an emergency.

TABLE B-3 EXTREME EVENTS: NON-TESTING/NON-MAINTENANCE OPERATION (ENGINE LOADS)

Date of Event Start	Extreme Heat Wave Event?	Non-Testing/Non-Maintenance Operations - @ actual load (MWh - per day)	Average Engine Loading on Event Day
Unknown		418.0	45.3%
11/26/2019		1.1	13.8%
11/27/2019		5.5	17.7%
2/15/2020		0.7	7.0%
7/31/2020		2.9	17.3%
8/14/2020		39.0	48.0%
8/16/2020		25.6	38.4%
8/17/2020	Aug 2020 Emergency	843.1	34.5%
8/18/2020	Aug 2020 Emergency	112.0	31.2%
8/19/2020	Aug 2020 Emergency	14.4	40.0%
8/25/2020		5.4	30.0%
9/6/2020	Sept 2020 Event	90.0	48.6%
9/7/2020	Sept 2020 Event	16.8	39.2%
Total		**1,574.7**	**Average 31.6%**

Sources: BAAQMD 2021b, Energy Commission staff analysis of data from BAAQMD

Frequency of Diesel Engine Emergency Use, Discussion. The BAAQMD scoping comment on the CA3 data center project illustrates that standby generator engines were used at data centers for "non-testing/non-maintenance" purposes that could occur more frequently than utility service power outages. In staff's review of prior data center cases that were proposed within the SVP territory, staff found that the likelihood of an outage on SVP's looped 60 kV system that forces the emergency operation of a data center's standby generators would be "extremely rare" and a low-probability event. For the prior cases in SVP territory, staff estimated a 1.6 percent probability of any given data center facility experiencing a power outage in a period of a year based on 10 years of data between 2009 and 2019 (e.g. CEC 2020a, CEC 2020b).

In BAAQMD's review, including the extreme events, 1,877 engine-hours of diesel engine use occurred at 20 data centers for "non-testing/non-maintenance" purposes (less than half of the 45 facilities included in the review, and less than a third of such facilities under BAAQMD's jurisdiction). These runtimes occurred due to power outages, in response to the heat storm, and also for other unspecified situations categorized by the engine operators as "emergencies." BAAQMD's review covered 288 individual diesel engines that operated over a 13-month record. Data was not provided concerning the number of engines at the 25 facilities that did not operate under these circumstances. Because the backup generator engines were collectively available for over 2.74 million engine-hours during the 13-month period (288 engines * 9,504 hours), and they were used for emergency operations for 1,877 engine-hours, at those facilities where operation occurred, the engines entered emergency operations during 0.07 percent of their available time (1,877 / 2.74 million). This confirms that emergency use of the engines would be very infrequent. It is important to note that this calculation only takes into consideration those engines that BAAQMD found to run during this time period; a more comprehensive review would also include the availability of the 25 facilities that had zero hours of engine run time and also conceivably the 21 facilities that were not surveyed at all. If these facilities without engine runs were included, the estimated probability that any given engine would be likely to run would be lower.

Duration of Diesel Engine Emergency Use, Discussion. The BAAQMD scoping comment on the CA3 data center project shows standby generator engines were used for "non-testing/non-maintenance" purposes, mostly due to extreme events within the 13-month record. The average runtime for each event in BAAQMD's review was approximately 5.0 hours. This shows that the duration of diesel engine use for "non-testing/non-maintenance" purposes, without excluding the extreme events, could involve longer runtimes than for typical utility service power outages. However, again this calculation does not factor in the larger proportion of facilities that did not run at all. In staff's review of prior data center cases, staff found an average of 2.6 hours per outage, based on only two transmission line outages occurred in 10 years (between 2009 and 2019) affecting data centers served by SVP's 60-KV lines (e.g. CEC 2020a, CEC 2020b).

BAAQMD's review of diesel engine use considers a wider variety of reasons for running the engines than solely an electric power service outage. The listed reasons include: state of emergency load shedding, human error event, utility-inflicted disturbance, lightning strikes to transmission line, utility outage, power outage, system-wide power quality event, equipment failure, power bump, power supplier request, power blips, UPS/board repair, utility sag event, mandatory load transfer, and substation transformer power equipment failure. Many of these explanations are simply subcategories under the general category of grid reliability analyzed for prior cases. Others like a human error event, equipment failure, and UPS/board repair appear to be exceedingly rare occurrences unlikely to significantly add to the calculation of when emergency operations might occur. Lastly, the category of emergency load shedding/power

supplier request/mandatory load transfer all appear related to the heat storm and Governor-proclaimed state of emergency described above and, given the state's efforts to address reliability in response to such events, are unlikely to re-occur with any frequency. The provision of these categories and sub-categories helps to explain why BAAQMD shows more instances of engines running than staff found in prior cases and longer durations of runtimes during emergency situations. Although emergency operations could be triggered for a range of situations, including extreme events like those of August and September 2020, this information confirms that regardless of the triggering event, emergency operations of standby generator engines would be expected to be infrequent and of short duration.

Summary of Staff's Analysis of "Non-testing/Non-maintenance" Engine Use. BAAQMD's review of "non-testing/non-maintenance" engine operations expands our understanding of "when, why, and for how long" diesel engine use might occur. BAAQMD's 13-month period of review included a Governor-proclaimed state of emergency, other outages, power quality events, and human errors. Accordingly, BAAQMD's review confirms that engine use may occur for reasons other than grid outages, though the period is not representative of a typical year due to the rare heat storm events. Many engines were used for "non-testing/non-maintenance" purposes in the period reviewed by BAAQMD, but the overall number of hours of operation for the less than half of the facilities in the review that did run was 0.07 percent of the available time. Engine loading levels recorded during these times of use were low (average below 40 percent), and the capacity factor of these engines was extremely low (0.024 percent). The BAAQMD review confirms that these types of events remain infrequent, irregular, and unlikely, and the resulting emissions are not easily predictable or quantifiable. The BAAQMD review does not show that these facilities operate significantly more than staff previously analyzed in the grid reliability context in prior cases.

CPUC Decisions, Directing PG&E, Southern California Edison, and San Diego Gas & Electric To Take Actions To Prepare For Potential Extreme Weather In The Summers Of 2021 And 2022, and Beyond

On March 25, 2021, CPUC adopted decision D.21-03-056, which directed the utilities to take specific actions to decrease peak and net peak demand and increase peak and net peak supply to avert the potential need for rotating outages that are similar to the events that occurred in summer 2020 in the summers of 2021 and 2022. On December 2, 2021, CPUC adopted decision D.21-12-015, which is Phase 2 of the proceeding, and focuses on increasing electric supply and reducing demand for 2022 and 2023 (CPUC 2021b).

Addressed in the decisions are the following scoped issues:

1. Flex Alert program authorization and design
2. Modifications to and expansion of Critical Peak Pricing (CPP) Program

3. The development of an Emergency Load Reduction Program (ELRP)
4. Modifications to existing demand response (DR) programs
5. Expedited Integrated Resource Plan (IRP) procurement
6. Modifications to the planning reserve margin (PRM)
7. Parameters for supply side capacity procurement
8. Expanded electric vehicle participation

This menu of options attempts to ensure grid reliability. One of the options, ELRP, allows PG&E, Southern California Edison, San Diego Gas & Electric, and CAISO to access additional load reduction during times of high grid stress and emergencies involving inadequate market resources, with the goal of avoiding rotating outages while minimizing costs to ratepayers.

The CPUC decisions would allow data centers to choose to participate in a program whereby they could be asked to shed load if an extreme heat event similar to the August 2020 event occurs in the summer of 2022 or 2023. The initial duration of the ELRP pilot program will be five years, 2021-2025, with years 2023-2025 subject to review and revision in the Demand Response Applications proceeding. However, the CPUC decision lays out many options for emergency load reduction to ensure grid reliability that could be utilized before resorting to backup diesel generators. The decision explains that the ELRP design aspects that are subject to review and revision as part of the pilot program include minimizing the use of diesel backup generators where there are safe, cost-effective, and feasible alternatives (CPUC 2021a, Section 5.2, page 19).

However, it is not expected that the proposed project would be operational until after the summer of 2024, based on the applicant estimated construction schedule of 16-19 months for Phase I and the applicant anticipated beginning date in second quarter 2023 (DayZenLLC 2023a). Thus, the proposed project would not be online in time to be part of the first phase of ELRP, when extra measures are mostly likely to be needed to ensure grid reliability. It is less likely that these types of measures will be necessary beyond the immediate future, as longer-term strategies for grid resilience, such as battery facilities to supplement intermittent renewable generation, come online.

In addition, the SPPE application indicated that the project would not be operated to participate in load-shedding or Resource Adequacy demand response programs (DayZenLLC 2021a). Furthermore, based on the capacity factors and run times for data centers that operated during the 2020 heat events, even if it were necessary to call on data centers to shed load again, it is expected that these facilities would be called on very infrequently and would have very low capacity-factors and run times in any potential future events.

Electrical Reliability Supporting Information

The California Energy Commission staff provided a series of questions to PG&E designed to understand when, why, and for how long backup generators would need to operate for any purpose, including PSPS, other than readiness testing or maintenance at the proposed data center in the PG&E service area.

This supporting information includes the following:

A. STACK Trade Zone Park Responses to CEC Data Requests Set 1 on June 7, 2022

B. STACK Supplemental Responses to CEC Staff Data Request Set 1 and 2 October 2022

A. STACK Trade Zone Park Responses to CEC Data Requests Set 1 Item 47-58 on June 7, 2022

47. Please provide a complete one-line diagram for the new onsite substation. Show all equipment ratings, including bay arrangement of the breakers, disconnect switches, buses, redundant transformers or equipment, etc., that would be required for interconnection of the SVYDC project.

Response to Data Request 47

One-line diagrams for SVY05, SVY06 & AMB are provided in Appendix PD DR-47.

48. Please provide a detailed description and a one-line diagram showing how the SVYDC and AMB would be connected to the onsite substation. Please label the name and voltage of the lines and feeders that connect to the onsite substation and both of the SVYDC and the AMB.

Response to Data Request 48

The AMB is not connected to the onsite substation. The AMB will be served by a PG&E Distribution circuit at 20.78 kV. The incoming PG&E feeder will be underground from the existing PG&E distribution system in the area and connected to a pad mounted transformer which will provide 480V utilization power to the AMB.

The on-site substation will be served from PG&E by a 115kV transmission line. The transmission line will be an extension of the Newark-Milpitas #2 115 kV line. The loop will come in overhead along Trade Zone Blvd and then exit the site underground in the Trade Zone right of way. On-site the transmission circuit will feed the 2 substation transformers overhead. Transformers are rated 60/80/100 MVA 65^{O}C, KNAN/KNAF/KNAF 115kV – 34.5kV, 10%Z. The 34.5 kV output from the transformers will be routed underground to the MV1 and MV2 Main-Tie switchboards. Switchboards are rated 38kV, 200A, 3P, 3W, 16kA, 150 kV BIL. MV1 and MV2 switchboards will be tied together via the Tie breakers in each board.

Out of the 34.5 kV switchboards there will be two distribution circuit breakers on each. One breaker each from MV1/2 will be used to create a loop for SVYDC05 building through two 5 Way Switches via underground feeders. 5 Way Switches are rated 34.5 kV, 3P, 3W, 900A, 25 kAIC. The other two breakers in MV1/2 will be used to create a loop for SVYDC06 building through two 5 Way Switches via underground feeders. For each building the two 5 Way Switches will have Way 1 – Incoming feed from substation, Way 2 – Tie feed to the other switch, Way 3 – 1st floor transformer loop, Way 4 – 2nd floor transformer loop, Way 5 – 3rd floor transformer loop.

Each loop out of the 5 Way Switches will feed 35.5 kV – 480 V transformers which will provide utilization voltage at the Data Center.

One-line diagrams responsive to this request are contained in Appendix PD DR-48.

49. Please provide the conductor name, type, current carrying capacity, and the overhead conductor size for the 115 kilovolt (kV) transmission lines that connect the existing PG&E 115 kV Newark-Milpitas #2 line to the onsite substation.

Response to Data Request 49

STACK has requested this information from PG&E and will docket once received.

50. Please provide pole configurations that would support the 115 kV overhead line that would loop into the onsite substation.

Response to Data Request 50

STACK has requested this information from PG&E and will docket once received.

51. Please provide the underground cable name, type, current carrying capacity, and underground cable size for the 115 kV transmission lines that connect the existing PG&E 115 kV Newark-Milpitas #2 line to the onsite substation.

Response to Data Request 51

STACK has requested this information from PG&E and will docket once received.

52. What is the proposed AMB load?

Response to Data Request 52

The AMB load is anticipated to be 3000kVA.

53. Would one of the proposed transformers be able to support both of the SVYDC and the AMB loads when the other transformer is out?

Response to Data Request 53

No. The AMB is electrically isolated from the SVYDC and its backup generating facilities.

54. Please provide information that reviews the frequency and duration of historic outages of the Newark-Milpitas #2 115 kV line and related facilities that would likely trigger the loss of electric service to the proposed onsite substation and could lead to the emergency operations of the diesel-powered emergency backup generators. This response should identify the reliability of service historically provided by PG&E to similar customers in this part of its service territory.

Response to Data Request 54

STACK has requested this information from PG&E and will docket once received.

55. Please explain whether PG&E would need to upgrade its transmission system in order to reliably interconnect the SVYDC and AMB loads.

Response to Data Request 55

STACK has requested this information from PG&E and will docket once received.

56. Please provide the following regarding Public Safety Power Shutoff events:

- Would historical Public Safety Power Shutoff events have resulted in the emergency operations at the proposed SVYDC?
- Have there been changes to the PG&E system around the SVYDC that would affect the likelihood that future Public Safety Power Shutoff events would result in the operation of emergency backup generators at the proposed SVYDC?

Response to Data Request 56

STACK has requested this information from PG&E and will docket once received. It is important to note that STACK's operational data center located immediately to the east of the TPZ did not experience any outages during any of the PSPS events since the PSPS Program inception.

57. Please clarify if there would be a 60 kV transmission line that would loop into the proposed substation in addition to the two proposed 115 kV transmission lines. If yes, please provide a complete one-line diagram showing the 60 kV and 115 kV lines interconnection to the proposed onsite substation. Show all equipment ratings, including bay arrangement of the breakers, disconnect switches, buses, redundant transformers or equipment, etc., that would be required for the interconnection of the SVYDC project.

Response to Data Request 57

There is no 60kV transmission line that would loop into the proposed substation. The only transmission lines are the two 115kV transmission lines.

58. Please explain when a determination of if or which existing towers would need to be replaced would be known, and, if towers need to be replaced, when details about their replacement would be provided to staff.

Response to Data Request 58

STACK has requested this information from PG&E and will docket once received.

B. STACK Supplemental Responses to CEC Staff Data Request Set 1 and 2 October 2022 - PG&E Responses Item 49 – 51, 54 – 56, 58

49. Please provide the conductor name, type, current carrying capacity, and the overhead conductor size for the 115 kilovolt (kV) transmission lines that connect the existing PG&E 115 kV Newark-Milpitas #2 line to the onsite substation.

Response to Data Request 49

- Conductor name = bundled 795 ACSS "Condor"
- Type = ACSS (Aluminum Conductor Steel Supported)
- Current carrying capacity = 2 X 1542 amps = 3084 amps (summer costal emergency)
- Overhead conductor size = 2 X 795 kcmil

50. Please provide pole configurations that would support the 115 kV overhead line that would loop into the onsite substation.

Response to Data Request 50

- Estimated pole height is expected to be between 70ft-130ft.
- Estimated number of poles is expected to be 4-6 TSPs
- Will include distribution under-build
- The attached photo shows a nearby pole; the new pole configuration would likely be similar. The poles have not yet been designed, so this should be considered a typical design that is preliminary and subject to change.

51. Please provide the underground cable name, type, current carrying capacity, and underground cable size for the 115 kV transmission lines that connect the existing PG&E 115 kV Newark-Milpitas #2 line to the onsite substation.

Response to Data Request 51

- Underground cable name – The line will be a loop of the existing Newark-Milpitas #2 115kV Line, becoming 2 separate circuits. The new circuits do not yet have names – they are to be determined (TBD).
- Type – Cross Linked Polyethylene Insulated cable in concrete-encased duct bank
- Current carrying capacity and underground cable size – Minimum Standard Conductor Size 2,500 Copper (app 1200 Amps), exact size and rating TBD by Ampacity Study.

54. Please provide information that reviews the frequency and duration of historic outages of the Newark-Milpitas #2 115 kV line and related facilities that would likely trigger the loss of electric service to the proposed onsite substation and could lead to the emergency operations of the diesel-powered emergency backup generators. This response should identify the reliability of service historically provided by PG&E to similar customers in this part of its service territory.

Response to Data Request 54

Since STACK would have two feeds (Newark – STACK and STACK – Milpitas), any potential outage that could occur on a section of the Newark-Milpitas #2 115 kV line would be isolated. If one of the feeds connected to STACK's switching station were to go down, it would most likely not result in a service outage. The loss of both feeds would be possible but rare. A table that shows a record of historic emergency outages is provided below. (Table DR54)

55. Please explain whether PG&E would need to upgrade its transmission system in order to reliably interconnect the SVYDC and AMB loads.

Response to Data Request 55

There are no current plans to do so.

56. Please provide the following regarding Public Safety Power Shutoff events:

- Would historical Public Safety Power Shutoff events have resulted in the emergency operations at the proposed SVYDC?
- Have there been changes to the PG&E system around the SVYDC that would affect the likelihood that future Public Safety Power Shutoff events would result in the operation of emergency backup generators at the proposed SVYDC?

Response to Data Request 56

No PSPS events have been recorded at Milpitas. Future PSPS events that would result in an outage at the proposed substation are not likely because STACK would have two feeds (Newark – STACK and STACK – Milpitas). If one of the feeds connected to STACK's switching station were to be taken out of service, it would most likely not result in a service outage.

Neither Newark nor Milpitas substations are located in the HFRA. Neither is the proposed project site. In the most recent PSPS lookback neither one of these substations was identified as an impact through the direct impact analysis. This direct impact analysis lookback study reviewed historical weather going back to 2008 and identified locations that would have been impacted using today's criteria for PSPS. These particular substations were not impacted at all during the time period between 2008 and today. Based on the geographic location outside of the HFRA and the results of this study it is very unlikely for one or both of these substations to be impacted by a PSPS event. Due to the unpredictable nature of weather events, it is not impossible though.

58. Please explain when a determination of if or which existing towers would need to be replaced would be known, and, if towers need to be replaced, when details about their replacement would be provided to staff.

Response to Data Request 58

The tubular steel pole (TSP) on the east side of the intersection between Montague Express way and Trade Zone Blvd may need to be replaced to convert it to a riser TSP. We may be able to save it when we get into detailed design. Preliminary plans do not include replacing the pole on the west side of the intersection between Montague Express way and Trade Zone Blvd, but that could change with further, detailed design.

We do not yet have a schedule for the design targets. We typically know whether poles being replaced at 60% design.

Appendix PD DR-47

Substation One-Line Diagram

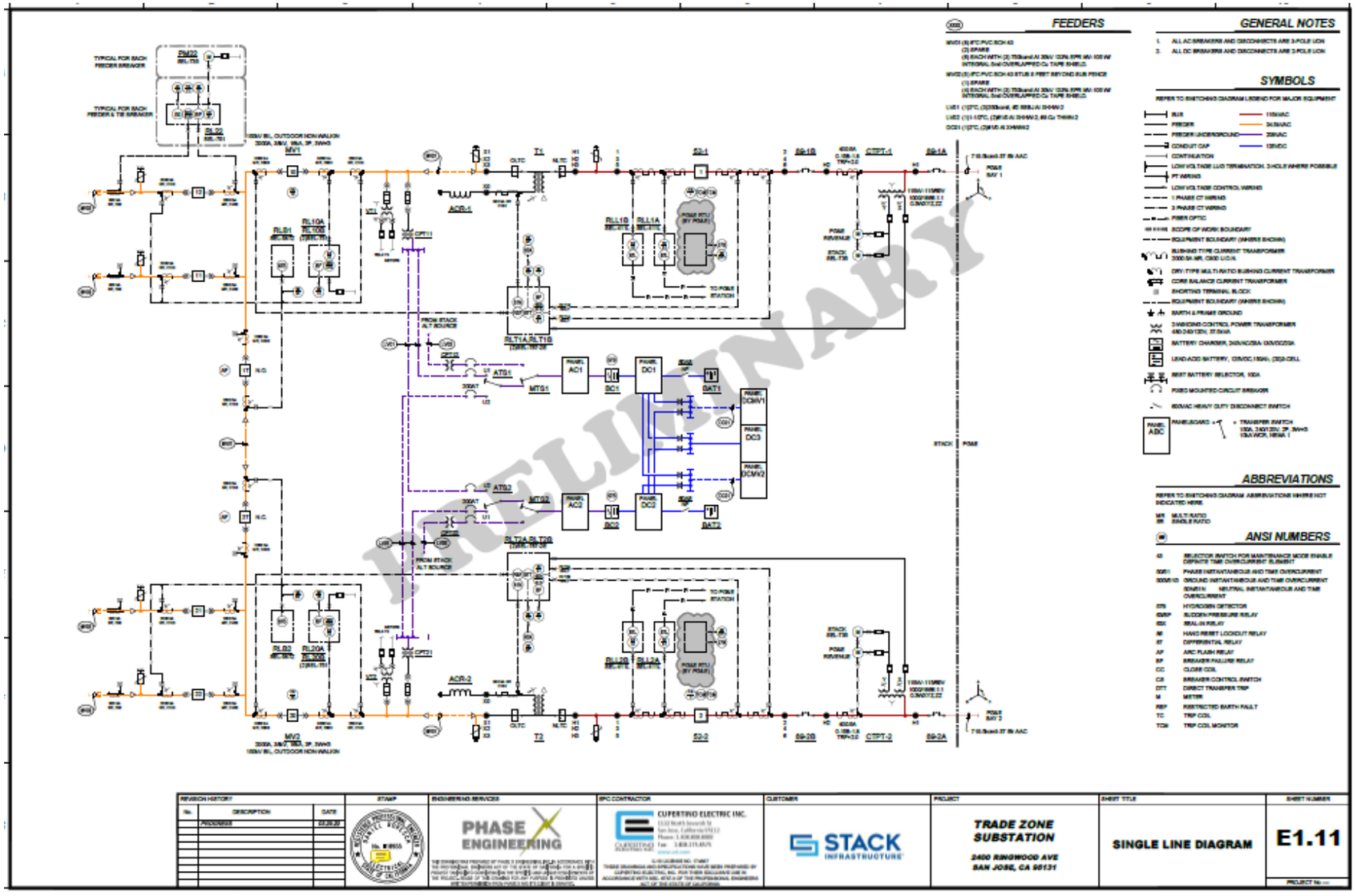
FEEDERS
GENERAL NOTES
1. ALL AC BREAKERS AND DISCONNECTS ARE 3-POLE UON
2. ALL DC BREAKERS AND DISCONNECTS ARE 3-POLE UON
SYMBOLS
ABBREVIATIONS
ANSI NUMBERS
PRELIMINARY
PHASE ENGINEERING
CUPERTINO ELECTRIC INC.
STACK INFRASTRUCTURE
TRADE ZONE SUBSTATION
2400 RINGWOOD AVE
SAN JOSE, CA 95131
SINGLE LINE DIAGRAM
E1.11

Table DR54 Outage History Newark – Milpitas #2 115 kV Line

kV	FACILITY	Date_Out	MED	Wire_ Down	Auto_Reclose _Disabled	Durn_mins	Cause_ Category	Cause_Detail	Secondary_ Cause	Comments	Cust_ Affected
115	Newark_Milpitas No2	5/14/2007				8	Other	Safety Clearance	RELY	Forced open Newark CB 170 to make relay setting changes, open ending this 115kV line	0
115	Newark_Milpitas No2	9/15/2007				76	Unknown	Patrol found nothing	NONE	Relayed, did not test; no customers affected; 0313 manually tested OK; no trouble found; weather clear	0
115	Newark_Milpitas No2	12/25/2008				1768	Work Procedure Error	Inattention	COND	Relayed, tested NG; no interruption; 1624 report of loose jumper at twr 8/125 (DDE, TSP); line cleared next day from 0725 to 1444 to repair loose jumper; eventID=6228	0
115	Newark_Milpitas	10/10/2012				264	Animal	Bird	INSL	Relayed - 10/10/12, 0122 Newark #2-115kV bus sect 'F' relayed, did not test by design due to avian (hawk) contact at Newark CB-540 T-tap; on the trouble Newark- NRS #2, Newark-Applied Materials, Newark-Trimble, Newark-Dixon Landing & Newark-Milpitas #2, 115kV lines open-ended at Newark; Newark-Nummi 115kV de- energized; SUS Nummi & Western Digital; 1613 bus sect 'F' CB-540 & T-tap cleared to replace flashed insulators, returned normal @ 2139	0

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CAISO 2021 – California Independent System Operator (CAISO). Final Root Cause Analysis Mid-August 2020 Extreme Heat Wave, dated January 13, 2021. Accessed December 2022. Available online at: http://www.caiso.com/Documents/Final-Root-Cause-Analysis-Mid-August-2020-Extreme-Heat-Wave.pdf

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CEC 2020b – California Energy Commission (CEC). Mission College Data Center Initial Study and Proposed Mitigated Negative Declaration (TN 232798), April 2020. Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-05

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DayZenLLC 2022n – DayZenLLC (DayZenLLC). (TN 246142). STACK Trade Zone Park Revised Project Description, dated September 19, 2022. Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-SPPE-02

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Appendix C

Nitrogen Deposition Modeling

Appendix C: Nitrogen Deposition Modeling

Nitrogen deposition is the term used to describe the input of reactive nitrogen species from the atmosphere to the biosphere. The pollutants that contribute to nitrogen deposition derive mainly from oxides of nitrogen (NOx) and ammonia (NH_3) emissions.

These pollutants are deposited as "atmospherically derived nitrogen" (ADN), primarily nitric acid (HNO_3). The chemical conversion from NOx and NH_3 to ADN takes place in the atmosphere over a period of hours after the pollutants are discharged from their sources.

Staff modeled the potential nitrogen deposition impacts from readiness testing and maintenance of the proposed standby generators within a six-mile radius of the project site, including sensitive habitat such as serpentine habitat and USFWS-designated critical habitat for the California red-legged frog (federally listed threatened).

The annual NOx emissions and potential nitrogen deposition impacts are conservatively estimated at 50 hours of readiness testing and maintenance per year per engine (DayZenLLC 2021a). The project would include 36 3-megawatt (MW) and three 1-MW engines, equipped with selective catalytic reduction (SCR) to reduce the NOx emissions to meet Tier 4 emission standards. It takes time for the SCR to warm up to be fully effective. Staff assumes that the engines would emit NOx at the Tier 2 emissions rates for the initial 15 minutes of each hour of readiness testing and maintenance, to reflect the periods prior to SCR warmup. This is consistent with the applicant's modeling approach for annual-average impacts to the ambient air quality standards (DayZenLLC 2021d). Staff also assumes that NH_3 emissions would occur as a result of urea usage in the SCR, although NH_3 would only occur after warmup of the SCR (DayZenLLC 2022f).

Staff used the American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) to evaluate the potential nitrogen deposition impacts of the project. The model overestimates nitrogen deposition impacts with the following assumptions:

- One hundred percent of the NOx and NH_3 conversion to ADN within the stack rather than allowing the conversion to occur over distance and time. It ignores the fact that the conversion process requires sunlight, moisture, and time. It is unlikely that there would be sufficient time for all of the emitted NOx or NH_3 to convert to ADN near the project.
- Maximum settling velocities derived from the parameters for HNO_3 (which, of all the depositional species, has the most affinity for soils and vegetation and the tendency to adhere to what it is deposited on) to produce maximum, or conservatively estimated, deposition rates.

As stated above, staff's analysis of nitrogen deposition impacts includes conservative assumptions for annual emissions and conversion to ADN. This overestimates the nitrogen deposition impacts expected from routine readiness testing and maintenance of

the standby generators. On the other hand, staff does not quantify the possible non-routine or emergency use of the generators due to the infrequent, irregular, and unplanned nature of emergency events. However, staff believes by overestimating the nitrogen deposition impacts of routine readiness testing and maintenance, the results would capture the impacts of some emergency operations that may occur.

In addition, the NOx emissions of the standby generators for readiness testing and maintenance would be fully offset through the permitting process with the Bay Area Air Quality Management District (BAAQMD). The NOx offset would mitigate the project's effects on basin-wide nitrogen deposition.

References

DayZenLLC 2021a – DayZenLLC (DayZenLLC). (TN 240910). STACK Backup Generating Facility Application for SPPE, dated December 10, 2021. Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-SPPE-02

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Appendix D

Natural Gas Supplemental Information

Appendix D: Natural Gas Supplemental Information

Natural Gas Internal Combustion Engines

Introduction

Staff has researched the difference in cost, supply, and emissions of using natural-gas-fueled internal combustion engines (ICEs) in place of conventional petroleum diesel for the emergency backup generators proposed for this project. Currently, there is limited information available on the fuel supply reliability of natural gas delivered to the site by pipeline versus the reliability of delivering liquid petroleum diesel by tanker truck to the site. However, most backup generators currently in place use diesel. A nationwide survey in 2016 revealed that 85 percent of the emergency backup generation was served by diesel, while 10 percent was served by natural gas and the remainder by propane.[1]

Cost Difference Between Natural Gas and Petroleum Diesel Emergency Backup Generators

The reliability of a system is an important consideration when selecting an emergency backup generator. But cost is important as well. Many factors contribute to the life-cycle costs of a backup system, such as equipment, maintenance, and fuel costs.

Both natural gas ICEs and diesel engines are reciprocating engines. They are available in sizes up to 18 MW. The fast start-up capability of reciprocating engines allows for the timely resumption of the system following a maintenance procedure. In peaking or emergency power applications, reciprocating engines can quickly supply electricity on demand. The annual energy cost ($/MMBtu) for natural gas fuel is lower than conventional diesel. But diesel generators generally have a lower component cost than ICEs. It is notable that improvements in ICEs and recently promulgated air quality regulations have reduced some of the cost advantages of diesel systems.

The size of the engines can impact operating cost. If switching from one generating technology to another requires more engines to deliver the same total MW capacity, the repair and maintenance frequency and testing requirements could increase, which may result in an increase in associated costs.

Space Needs

Diesel-fueled emergency backup generators are typically built on a rack over their fuel supply tank, requiring space between each generator and a staircase and service deck at the elevation of the diesel engine. Based on air quality modeling files, staff estimated the

1 National Renewable Energy Laboratory report. A Comparison of Fuel Choices for Backup Generators; https://www.nrel.gov/docs/fy19osti/72509.pdf.

footprint of the 39 engines proposed at the project site as approximately 0.35 acres for 111 MW (peak power) or approximately 317 MW per acre.

Enchanted Rock, a vendor for natural gas ICEs, provided a drawing showing how they would arrange their engines at a typical site. The result was an approximate capacity of 78 MW per acre.

Natural Gas ICE Emissions Compared to Petroleum Diesel

Criteria Air Pollutant and Carbon Dioxide Emissions Comparison

Staff compared criteria air pollutant emissions and carbon dioxide emissions of natural gas ICEs against the proposed diesel-fired engines for the project. The proposed diesel engines would be equipped with selective catalytic reduction (SCR) and diesel particulate filter (DPF) to achieve compliance with Tier 4 emission standards. However, it takes time for the SCR to reach the activation temperature and become fully effective in controlling oxides of nitrogen (NOx) emissions. Depending on load, the SCR would be expected to kick on within 15 minutes.

Information for the natural gas ICEs is primarily based on the data provided for the Small Power Plant Exemption application for the San Jose Data Center (Jacobs 2021a). The natural gas ICEs for the recently exempted San Jose Data Center (19-SPPE-04) would be equipped with a 3-way catalyst system to reduce emissions of NOx, carbon monoxide (CO), volatile organic compounds (VOC), and air toxics. The applicant for the San Jose Data Center also assumed 15 minutes of operation with uncontrolled emissions and 45 minutes of operation with controlled emissions to estimate hourly emissions (Jacobs 2021b).

Table D-1 compares the emission factors in pounds per megawatt-hour (lbs/MWe-hr) for the proposed larger Caterpillar 3516E engines, which are the majority of the diesel engines proposed at the project, and those for the natural gas ICEs proposed at the San Jose Data Center. Staff assumed the same 15-minute warm up period for the SCRs of the diesel engines and the 3-way catalyst system for the natural gas ICEs.

It should be noted that the emission factors for the proposed Caterpillar 3516E engines shown in **Table D-1** are based on the use of petroleum-based diesel. However, the applicant has proposed to use renewable diesel as the primary fuel for the engines, with ultra-low sulfur diesel serving as a secondary fuel when renewable diesel is unavailable. The California Air Resources Board's (CARB) 2021 testing report (CARB 2021) shows that for diesel engines with SCR and DPF, there are no statistically significant differences in NOx, particulate matter (PM), and total hydrocarbon emissions using renewable diesel when compared to using ultra-low sulfur petroleum-based diesel. For CO emissions, there are either no statistically significant differences (or emissions were already below background levels) between renewable diesel and ultra-low sulfur petroleum-based diesel or 5 to 44 percent decrease using renewable diesel compared to ultra-low sulfur petroleum-based diesel, depending on the testing cycle used. Ideally, this should be

confirmed with testing under controlled conditions in the same size of engine proposed for this facility and using the same source test cycle used for engine certification. With the currently available information, staff expects the comparison results of criteria air pollutant emissions of the natural gas ICEs alternative to the proposed diesel engines using renewable diesel would be similar to those shown for conventional ultra-low sulfur diesel in **Table D-1**, except that the exact reduction percentage in CO emissions may be a little different depending on the testing cycle used.

Toxics Emissions

Staff is not able to find data comparing toxics emissions of natural gas ICEs with those for diesel engines. However, these are expected to be reduced due to the reductions reported above for VOCs and PM.

TABLE D-1 CRITERIA AIR POLLUTANT AND CARBON DIOXIDE EMISSIONS NATURAL GAS ICE VERSUS PETROLEUM DIESEL ICE

	Units	Proposed Engine (CAT 3516E) with Petroleum Diesel	Natural Gas ICE	Difference	Percent Difference (%)
NOx	Lbs/MWe-hr	4.51	0.09	-4.42	-98.1
PM	Lbs/MWe-hr	0.04	0.01	-0.03	-77.4
VOC	Lbs/MWe-hr	0.41	0.10	-0.31	-75.2
CO	Lbs/MWe-hr	7.69	1.68	-6.01	-78.2
SO_2	Lbs/MWe-hr	0.01	0.009	-0.01	-42.1
CO_2	Lbs/MWe-hr	1,573	1,440	-133	-8.4

Sources: DayZenLLC 2021d, Jacobs 2021a, and California Energy Commission staff analysis

Fuel-cycle Greenhouse Gas Emissions Comparison

Table D-1 shows that the tailpipe CO_2 emissions of natural gas ICEs would be about 8.4 percent lower than those for the proposed engines with the use of ultra-low sulfur petroleum-based diesel. However, the applicant has proposed to use renewable diesel as primary fuel in the proposed engines. CARB's 2021 testing report (CARB 2021) shows that the tailpipe CO_2 emissions would reduce about 3 to 4 percent using renewable diesel compared to ultra-low sulfur petroleum-based diesel. Therefore, the tailpipe CO_2 emissions of natural gas ICEs would only be about 4 to 5 percent lower than those for the proposed engines using renewable diesel. Ideally, this should be confirmed with testing under controlled conditions in the size of engine proposed for this facility. However, to have a more complete understanding of the impact of replacing diesel with natural gas, it is necessary to examine the full fuel-cycle of each fuel from origin to use. This is because greenhouse gas emissions (GHG) have a global impact rather than a local impact.

To compute full fuel-cycle GHG emissions, a model called GREET[2] is commonly used to evaluate full fuel-cycle GHG emissions for transportation. Although staff has not computed fuel-cycle emissions using GREET, we can estimate the relative change in GHG emissions using carbon intensity values from the Low Carbon Fuel Standard (LCFS) program. Carbon intensity values obtained from the program[3] can be used to estimate the expected GHG emissions reductions associated with switching from ultra-low sulfur petroleum-based diesel to renewable diesel and natural gas in this project. CARB staff use a version of GREET called CA-GREET to compute carbon intensity values for the LCFS program.[4] GREET results should be combined with stack emissions shown above to get an understanding of the relative GHG emissions associated with both natural gas ICEs and petroleum diesel ICEs.

Table D-2 shows the carbon intensity values of renewable diesel and natural gas compared to ultra-low sulfur petroleum-based diesel. For renewable diesel, the data shown in **Table D-2** are CARB-estimated values for Neste reformulated diesel supplied from various feedstocks with the renewable diesel produced at the Neste refinery located in Singapore. These carbon intensity values include the feedstock and transport to California via oceangoing tanker. For comparison purposes, the carbon intensity for ultra-low sulfur petroleum-based diesel/CARB diesel has a value of 100.45, as shown at the bottom of the table. **Table D-2** shows that there are 61 to 83 percent reduction in carbon intensity values using renewable diesel in place of ultra-low sulfur petroleum-based diesel. However, renewable diesel still has some carbon associated with the fuel-cycle, as evidenced by the carbon intensity values in **Table D-2** not being zero, so additional measures would be needed before the project could be considered a carbon-free facility.

Carbon intensity values shown in **Table D-2** indicate that natural gas ICEs fueled with pipeline natural gas produced from fossil feedstocks have a carbon intensity about 20 percent lower than petroleum diesel. Natural gas feedstocks from renewable feedstocks have a carbon intensity that is much lower, with most of the renewable feedstocks

2 Greenhouse gases, Regulated Emissions, and Energy use in Transportation. Available from Argonne National Labs. From the Arbonne web site: Analysis of transportation systems on a life-cycle basis permits us to better understand the breadth and magnitude of impacts produced when vehicle systems are operated on different fuels or energy options like electricity or hydrogen. Such detailed analysis also provides the granularity needed to investigate policy implications, set R&D goals, and perform follow-on impact and policy assessments. US Department Energy's Office of Energy Efficiency and Renewable Energy, Systems Assessment Group in Argonne's Energy Systems Division has been developing the GREET model to provide a common, transparent platform for lifecycle analysis (LCA) of alternative combinations of vehicle and fuel technologies. Vehicle technologies include conventional internal combustion engines, hybrid electric systems, battery electric vehicles, and fuel cell electric vehicles. Fuel/energy options include petroleum fuels, natural gas-based fuels, biofuels, hydrogen, and electricity. LCAs conducted with the GREET platform permit consideration of a host of different fuel production, and vehicle material and production pathways, as well as alternative vehicle utilization assumptions. GREET includes all transportation modes – on-road vehicles, aircraft, marine vessels, and rail (to be added in a new GREET release). The Systems Assessment Group has conducted various LCAs of vehicle/fuel systems for DOE and other agencies. There are more than 20,000 registered GREET users.

3 https://ww2.arb.ca.gov/resources/documents/lcfs-pathway-certified-carbon-intensities

4 https://ww2.arb.ca.gov/resources/documents/lcfs-pathway-certified-carbon-intensities.

associated with a net reduction in fuel-cycle carbon emissions. In other words, these feedstock options act as a way of capturing GHG emissions that would otherwise escape. Negative values in **Table D-2** below reflect this outcome. Converting these feedstocks into a fuel would provide substantial societal benefits since the feedstock would otherwise be contributing directly to global warming. In order for the natural gas ICEs to remain an environmentally superior alternative to the proposed project using renewable diesel for GHG, it would be required to use certain percentage of renewable natural gas to reduce the fuel cycle GHG emissions.

A recent study done for the State Water Resources Control Board by Carollo Engineers[5] and published in June 2019 illustrates how food wastes can be converted to renewable natural gas and achieve significant GHG emissions reductions. Through the co-digestion of food waste diverted from landfills and processed in anaerobic digesters, municipal wastewater treatment plants have the potential to produce, capture, and make beneficial use of biogas, which is a renewable source of methane.

The Carollo report stated that landfills accounted for approximately 8,560,000 metric tons of carbon dioxide equivalent ($MTCO_2e$) emissions as methane in 2016, or about 22 percent of statewide methane emissions. They estimated that by the year 2030, approximately 3.4 million short wet tons of food waste could be diverted from landfills to municipal wastewater treatment plants for co-digestion and processing into renewable natural gas for beneficial use. This would reduce methane emissions from landfills and reduce GHG emissions from this sector by up to approximately 2.4 $MMTCO_2e$.

TABLE D-2 CARBON INTENSITY VALUES COMPUTED FROM CA-GREET MODEL

Feedstock	Carbon Intensity	Percent Reduction from Petroleum Diesel (%)
Renewable Diesel		
Asian-sourced used cooking oil	16.89	-83
Globally averaged used cooking oil	25.61	-75
Southeast Asian fish oil	33.08	-67
North American tallow	34.19	-66
New Zealand tallow	34.81	-65
Australian tallow	36.83	-63
Midwest corn oil	37.39	-63
Globally averaged tallow	39.06	-61
Natural Gas		
PG&E Gas	80.59	-19.7
Average Pipeline Gas	79.21	-21.1
SoCal Gas	78.21	-22.1
Landfill Gas	-5.28 to 62.30	-105 to -38
Food Wastes	-22.93	-122
Dairy Manure	-377.83 to -192.49	-476 to -292

5 WRCB, Co-Digestion Capacity In California; Co-Digestion Capacity Analysis Prepared for the California State Water Resources Control Board under Agreement #17-014-240.June 2019. Available online at: https://www.waterboards.ca.gov/water_issues/programs/climate/docs/co_digestion/final_co_digestion_capacity_in_california_report_only.pdf.

Renewable Natural Gas	-630.72 to -151.41	-728 to -251
Ultra-Low Sulfur Diesel/CARB Diesel	100.45	0

While renewable natural gas would result in a net reduction in fuel-cycle carbon emissions, a 2018 report funded by the California Public Utilities Commission (CPUC) evaluated issues with injecting fuels other than natural gas into natural gas pipelines. The report was titled: *Biomethane in California Common Carrier Pipelines: Assessing Heating Value and Maximum Siloxane Specifications -- An Independent Review of Scientific and Technical Information*.[6] Assembly Bill 1900 (Chapter 602, Statutes of 2012), which became operative beginning in 2013, required, among other things, that the CPUC review and upgrade as appropriate specifications for adding biogas to the state's existing natural gas pipeline system.

In 2006 the CPUC adopted Decision 06-09-039 increasing the specified minimum allowable biomethane heating value from 970 British Thermal Units per standard cubic foot of gas (BTU/scf) to 990 BTU/scf.

In 2014 the CPUC adopted Decision 14-01-034, which included additional gas quality specification requirements that biogas would need to meet before it could be added to natural gas pipelines, including a maximum siloxane content of 0.1 mg siloxane per cubic meter of gas (mg/m^3). This level was set to protect against equipment damage and catalyst poisoning.

The 2018 CPUC report recommends that CPUC conduct further work to determine the acceptability of allowing an heating value as low as 970 BTU/scf, which is the value that was allowed before the 2006 CPUC decision to increase the heating value to 990 BTU/scf.

The 2018 CPUC report stated that siloxanes are not expected to be present in dairy waste, agriculture waste, or forestry residues. It concluded that these sources could be held to a reduced and simplified verification regime.

Further work may be needed to integrate renewable natural gas into the existing natural gas pipeline system in a cost-effective manner.

Contracting to obtain rights for renewable gas would lead to greater GHG benefits. This can be accomplished simply by displacement if the issues identified above can be resolved, assuming that the location of the use of the renewable natural gas is different from the source of the renewable natural gas unless they are close enough together to use a dedicated pipeline.

As shown in **Table D-2**, *fossil* natural gas and some forms of renewable natural gas still has some carbon associated with the fuel cycle. These show up in the table for those

6 See: https://ccst.us/wp-content/uploads/2018biomethane.pdf

fuels with a carbon intensity that is greater than zero. In these cases, additional measures could be needed before the project would be considered a carbon-free facility.

References

CARB 2021 – California Air Resources Board (CARB). Low Emission Diesel (LED) Study: Biodiesel and Renewable Diesel Emissions in Legacy and New Technology Diesel Engines, Final Report – November 2021. Available Online at: https://ww2.arb.ca.gov/resources/documents/low-emission-diesel-led-study-biodiesel-and-renewable-diesel-emissions-legacy. Accessed June 2022.

DayZenLLC 2021d – DayZenLLC (DayZenLLC). (TN 240911-1). STACK Backup Generating Facility Application for SPPE Appendices A and B, dated December 10, 2021. Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-SPPE-02.

Jacobs 2021a – Jacobs (Jacobs). (TN 239413). SJC Data Center SPPE Application Supplemental Filing Appendix Air - Traffic, Part 1, dated August 20, 2021. Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-04.

Jacobs 2021b – Jacobs (Jacobs). (TN 239409). SJC Data Center SPPE Application Supplemental Filing Volume 1, dated August 20, 2021. Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-04.

Appendix E

Mailing List

Appendix E: Mailing List

The following is the mailing list for the STACK Trade Zone Park project.

The following is a list of the State agencies that received State Clearinghouse notices and documents:

- California Air Resources Board (ARB)
- California Department of Fish and Wildlife
- Bay Delta Region 3 (CDFW)
- California Department of Fish and Wildlife, Marin Region 7 (CDFW)
- California Department of Forestry and Fire Protection (CAL FIRE)
- California Department of Parks and Recreation
- California Department of Transportation, District 4 (DOT)
- California Department of Water Resources (DWR)
- California Energy Commission
- California Highway Patrol (CHP)
- California Natural Resources Agency
- California Public Utilities Commission (CPUC)
- California Regional Water Quality Control Board, San Francisco Bay Region 2 (RWQCB)
- California State Lands Commission (SLC)
- Office of Historic Preservation
- San Francisco Bay Conservation and Development Commission (BCDC)
- State Water Resources Control Board
- Division of Drinking Water
- State Water Resources Control Board
- Division of Water Quality
- California Native American Heritage Commission (NAHC)
- Department of Toxic Substances Control

Table E-1 presents the list of occupants and property owners contiguous to the project site.

Table E-2 presents the list of property owners within 1,000 feet of the project site and 500 feet of the project linears.

Table E-3 presents the list of agencies, including responsible and trustee agencies and libraries.

TABLE E-1 OWNERS AND OCCUPANTS OF PROPERTY CONTIGUOUS TO PROJECT SITE				
Name	**Address**	**City**	**State**	**Zip**
OCCUPANT	2305 RINGWOOD AVE	SAN JOSE	CA	95131
OLD DOMINION FREIGHT LINE INC	500 OLD DOMINION WAY	THOMASVILLE	NC	27360
RAHIMA INTERNATIONAL FOUNDATION	1823 HOURET CT	MILPITAS	CA	95035
GNG PAINTING SERVICES INC,	1751 FORTUNE DR STE E	SAN JOSE	CA	95131
LE, THANH VY THI; TAN, HUYNH P	2728 RAINVIEW DR	SAN JOSE	CA	95133
MCDOWELL, DAVID ROBERT	228 LAS MIRADAS DR	LOS GATOS	CA	95032
GAMDAN PROPERTIES LLC	1751 FORTUNE DR STE J	SAN JOSE	CA	95131
CHAN JACKY JIUNN JYE	423 BROADWAY	MILLBRAE	CA	94030
BOLAND EDWARD AND JENNIFER	221 ALEXANDER AVE	LOS GATOS	CA	95030
FAN XIUJUN AND ZHAO CHUNLI	2468 W BAYSHORE RD	PALO ALTO	CA	94303
LEE STEVE KANG	4886 MINTWOOD CT	SAN JOSE	CA	95129
LIM, DAEHYUN; KIM, DANYELL	6564 LOPEZ WAY	GILROY	CA	95020
PJG INVESTMENT HOLDINGS LLC	117 BERNAL RD	SAN JOSE	CA	95119
OCCUPANT	2001 FORTUNE DR	SAN JOSE	CA	95131
H5 CAPITAL-SAN JOSE LLC	9320 WILSHIRE BLVD	BEVERLY HILLS	CA	90212
SI SVY01-02 ABS LLC	1133 CONNECTICUT AVE NW SUITE 800	WASHINGTON	DC	20036
FORTUNE DRIVE INVESTORS, LLC	2244 BLACH PL	SAN JOSE	CA	95131
OCCUPANT	2010 FORTUNE DR	SAN JOSE	CA	95131
ONPLUS LLC	2010 LUNDY AVE	SAN JOSE	CA	95131
SPTC ESMT SOUTHERN PACIFIC TRANSPORTATION	65 CAHILL ST	SAN JOSE	CA	95110
M4 TERMINALS LLC	1700 MONTAGUE EXPY	SAN JOSE	CA	95131
MARK IV CAPITAL	4450 MACARTHUR BLVD 2ND FLOOR	NEWPORT BEACH	CA	92660
CHRISTIAN COMMUNITY FAITH & LOVE	2371 RINGWOOD AVE	SAN JOSE	CA	95131
OCCUPANT	2400 RINGWOOD AVE	SAN JOSE	CA	95131
OCCUPANT	1931 FORTUNE DR	SAN JOSE	CA	95131
MICREL INCORPORATED	2355 W CHANDLER BLVD	CHANDLER	AZ	85224
SAN JOSE CITY OF	801 N 1ST ST	SAN JOSE	CA	95110
AGARWAL ANISHA AND SHARMA MUKUL	1973 PACE WAY	MILPITAS	CA	95035
BAKSHI KARUN AND ANUSHA	1995 MOMENTUM DR	MILPITAS	CA	95035
BROCK EUGENE AND KRISTINA	1717 HAZELNUT LN	MILPITAS	CA	95035

TABLE E-1 OWNERS AND OCCUPANTS OF PROPERTY CONTIGUOUS TO PROJECT SITE				
Name	**Address**	**City**	**State**	**Zip**
CHOI, YOUNG MOON; KIM, MIN A	256 ODYSSEY LN # 25	MILPITAS	CA	95035
CURRENT RESIDENT/ RENTAL OFFICE	350 RIVER OAKS PKWY	SAN JOSE	CA	95134
DAS AVIK K	220 ODYSSEY LN # 29	MILPITAS	CA	95035
DEDHIA MAYANK	520 ODYSSEY LN	MILPITAS	CA	95035
DHARANI, RAUNAK; LADSARIA, ANISHA	252 ODYSSEY LN # 26	MILPITAS	CA	95035
FARRARO ERIC	258 ODYSSEY LN # 24	MILPITAS	CA	95035
GOEL RISHABH AND SANGHVI VIDHI M	268 ODYSSEY LN	MILPITAS	CA	95035
GONZALEZ CHANELLE M	335 TRADE ZONE BLVD	MILPITAS	CA	95035
GUJRAL, KAMALPREET SINGH; CHAVAN, RADHIKA PRASHANT	218 ODYSSEY LN # 30	MILPITAS	CA	95035
HUYNH, LONG T; PHAM, CAMTU T	1977 PACE WAY	MILPITAS	CA	95035
KHURMI AMANDEEP S AND RAMANPREET K	315 TRADE ZONE BLVD	MILPITAS	CA	95035
KIM, DONGYOUNG	325 TRADE ZONE BLVD	MILPITAS	CA	95035
KOO, ANDREW W; KOO, SALLIE W	262 ODYSSEY LN	MILPITAS	CA	95035
LI HUI WEN	226 ODYSSEY LN # 27	MILPITAS	CA	95035
LIANG GUANG GANG AND MA XIAO MIN	518 ODYSSEY LN	MILPITAS	CA	95035
MEHNDIRATTA BHARAT B AND SETH SHWETA D TRUS	216 ODYSSEY LN	MILPITAS	CA	95035
OCCUPANT	1975 PACE WAY	MILPITAS	CA	95035
OCCUPANT	216 ODYSSEY LN # 31	MILPITAS	CA	95035
OCCUPANT	222 ODYSSEY LN # 28	MILPITAS	CA	95035
OCCUPANT	260 ODYSSEY LN # 23	MILPITAS	CA	95035
OCCUPANT	262 ODYSSEY LN # 22	MILPITAS	CA	95035
OCCUPANT	512 ODYSSEY LN	MILPITAS	CA	95035
PARULEKAR SUBIR AND KULKARNI SWAPNA	260 ODYSSEY LN	MILPITAS	CA	95035
PHIRKE MANOJ P AND NARKHEDE PRIYANKA A TRUS	535 ODYSSEY LN	MILPITAS	CA	95035
TANG, RONGDI	1979 TRENTO LOOP	MILPITAS	CA	95035
WANG, LEBO; DONG, SHIQI	1979 PACE WAY	MILPITAS	CA	95035
ZHOU, SHOUYA; NG, CHONG KEONG	1982 PACE WAY	MILPITAS	CA	95035

TABLE E-2 PROPERTY OWNERS WITHIN 1,000 FEET OF PROJECT SITE AND 500 FEET OF LINEARS				
Name	**Address**	**City**	**State**	**Zip**
CHEMMACHEL MAGI J AND JIJO T	1811 HOURET CT	MILPITAS	CA	95035
A & E ANODIZING	1701 FORTUNE DR STE F	SAN JOSE	CA	95131
CHU SHERMAN	1701 FORTUNE DR	SAN JOSE	CA	95131
JDN PROPERTIES LLC	563 RUDD CT	SAN JOSE	CA	95111
TUNG STEVEN P	2235 RINGWOOD AVE	SAN JOSE	CA	95131
LIN BRIAN H	2220 RINGWOOD AVE	SAN JOSE	CA	95131
TRAN EDWARD H AND THY H	2200 RINGWOOD AVE	SAN JOSE	CA	95131
ALAVI SETAYESH	2196 RINGWOOD AVE	SAN JOSE	CA	95131
CHANG JENQ-SIAN JIM (TRUSTEE); CHANG SUH-SHIANG SUSAN (TRUSTEE)	2186 RINGWOOD AVE	SAN JOSE	CA	95131
BAI LIZHOU AND HUANG XIAOLI	2206 RINGWOOD AVE	SAN JOSE	CA	95131
MK & MJ LLC	2192 RINGWOOD AVE	SAN JOSE	CA	95131
PVT INVESTMENT	PO BOX 10548	NEWPORT BEACH	CA	92658
MOIR INVESTMENTS LLC	2176 RINGWOOD AVE	SAN JOSE	CA	95131
CHANG JIM AND HSIUPAI	521 FALLEN LEAF CIR	SAN RAMON	CA	94583
CHI CHARLIE WEN REN	2233 PETERSBURG DR	MILPITAS	CA	95035
FENGHUA LLC	237 LISBURN WAY	VACAVILLE	CA	95688
FERNANDEZ DAGOBERTO JR (TRUSTEE)	2480 ALLEGRO ST	LIVERMORE	CA	94550
FIGUEROA EVANGELINA C (TRUSTEE)	2120 URIDIAS RANCH RD	MILPITAS	CA	95035
GREEN LANE INVS LLC	10629 MAGDALENA RD	LOS ALTOS HILLS	CA	94024
H & H REAL PROPERTIES LLC	PO BOX 547	SAN JOSE	CA	95106
HO ROSANNA	25295 LA LOMA DR	LOS ALTOS HILLS	CA	94022
HUANG JOSEPH AND HSIU-HUA	18665 ARGUELLO AVE	MORGAN HILL	CA	95037
IBANEZ EDUARDO (TRUSTEE); IBANEZ ANGELICA (TRUSTEE)	355 HINES CT	SAN JOSE	CA	95111
KOONER RE LLC,	46540 FREMONT BLVD	FREMONT	CA	94538
NEW HORIZONS ENTERPRISES LLC	1751 FORTUNE DR	SAN JOSE	CA	95131
NGUYEN, KEVIN	3417 CUESTA DR	SAN JOSE	CA	95148
NOISE FLOOR HOLDINGS LLC	1055 BROKAW ROAD	SAN JOSE	CA	95131
O TOOLE JOHN J AND SALLY P	1001 SHERMAN OAKS DR	SAN JOSE	CA	95128
OU FRANK YEXUN AND YAU SHIRLEY NGANFAN	4566 RODERIGO CT	FREMONT	CA	94555
C/O YOUR INVESTMENT PROPERTY	19330 LOS GATOS RD	SARATOGA	CA	95070
PDX AUTOMATION LLC,	14838 SE BADGER CREEK RD	HAPPY VALLEY	OR	97086

TABLE E-2 PROPERTY OWNERS WITHIN 1,000 FEET OF PROJECT SITE AND 500 FEET OF LINEARS				
Name	**Address**	**City**	**State**	**Zip**
DAVID NGUYEN C/O RINGWOOD INVESTMENTS LLC,	1701 FORTUNE DR STE A	SAN JOSE	CA	95131
RINGWOOD PROPERTY LLC,	2151 PIEDMONT RD	SAN JOSE	CA	95132
SIMKARAN INC,	1655 SOUTH DE ANZA BLVD, SUITE 1	CUPERTINO	CA	95014
STARRIVER INC	1232 ELKWOOD DR	MILPITAS	CA	95035
TAM YAM SOON (TRUSTEE); TAM AMY MING YING (TRUSTEE)	20800 BOYCE LN	SARATOGA	CA	95070
TRUMPP WALTER C (TRUSTEE)	1540 INDUSTRIAL AVE	SAN JOSE	CA	95112
TRUONG DAT AND LAU TRACY	3135 CORBY DR	SAN JOSE	CA	95148
XDT PROPERTIES LLC,	1089 ROYAL ACRES CT	SAN JOSE	CA	95136
YAUNG FANGLING; LAI CHIEW FONG	1137 QUEENSBRIDGE WAY	SAN JOSE	CA	95120
DHAMIJA SURYA PRATAP AND POONAM (TRUSTEE)	45610 MONTCLAIRE TER	FREMONT	CA	94539
DHAMIJA SURYA PRATAP AND POONAM (TRUSTEE)	1815 HOURET CT	MILPITAS	CA	95035
FENGHUA LLC	2284 RINGWOOD AVE STE C	SAN JOSE	CA	95131
MUI EUGENE T (TRUSTEE); CHONG CHRISTINA K (TRUSTEE)	1701 FORTUNE DR STE O	SAN JOSE	CA	95131
TRUONG MICHAEL (TRUSTEE); HUYNH KIM CHI THI (TRUSTEE)	1751 FORTUNE DR STE C	SAN JOSE	CA	95131
FENGHUA LLC	5674 SONOMA DR	PLEASANTON	CA	94566
MSJL LLC	328 SANGO CT	MILPITAS	CA	95035
ANAND LIVING TRUST	2195 TRADE ZONE BLVD	SAN JOSE	CA	95131
NPN PROPERTIES LLC	2310 LUNDY AVE	SAN JOSE	CA	95131
ARK BAPTIST CHURCH	622 SANTOS CT	MILPITAS	CA	95035
CHO KI SU (TRUSTEE); CHO YONG C (TRUSTEE)	12273 VISTA ARROYO CT	SARATOGA	CA	95070
CORTESE CAROL I (TRUSTEE)	3626 NORCROSS CT	SAN JOSE	CA	95148
PACIFIC WEST COMMUNITIES INC,	430 E STATE ST	EAGLE	ID	83616
STEPHENS & STEPHENS XIX LLC	465 CALIFORNIA ST STE 330	SAN FRANCISCO	CA	94104
SAN JOSE EXECUTIVE CENTER	95 S MARKET ST #300	SAN JOSE	CA	95113
RESIDENT	2091-2099 FORTUNE DR	SAN JOSE	CA	95131
GAHRAHMAT FAM LIMITED PARTNERSHIP III LP	3476 EDWARD AVE	SANTA CLARA	CA	95054
NTT AMERICA INC	1741 TECHNOLOGY DR STE 350	SAN JOSE	CA	95110
GARCIA JOHN AND RACHEL R (TRUSTEE)	649 GIRALDA DR	LOS ALTOS	CA	94024
GEOMAX	3460 EDWARD AVE	SANTA CLARA	CA	95054

TABLE E-2 PROPERTY OWNERS WITHIN 1,000 FEET OF PROJECT SITE AND 500 FEET OF LINEARS				
Name	**Address**	**City**	**State**	**Zip**
FAGIN RICHARD A (TRUSTEE); HOEHL PATRICIA A (TRUSTEE)	2105 COWPER ST	PALO ALTO	CA	94301
TAN TEONG YEE AND LAI CHIEW FONG	1737 HAZELNUT LN	MILPITAS	CA	95035
GEOMAX	1911 TAROB CT	MILPITAS	CA	95035
CALLANISH LLC	231 STANLEY DR	SANTA BARBARA	CA	93105
PMP TECH INC	2245 RINGWOOD AVE	SAN JOSE	CA	95131
W W GRAINGER INC	18818 TELLER AVE	IRVINE	CA	92612
KEYPOINT CREDIT UNION,	2805 BOWERS AVE	SANTA CLARA	CA	95051
1953 CONCOURSE DRIVE LLC	19700 S VERMONT AVE # 101	TORRANCE	CA	90502
DP INTERNATIONAL LLC	3964 RIVERMARK PLZ	SANTA CLARA	CA	95054
LD ODYSSEY LLC	3964 RIVERMARK PLAZA STE 104	SANTA CLARA	CA	95054
TEMPLO LA HERMOSA OF	56 S MONTGOMERY ST	SAN JOSE	CA	95110
LD ODYSSEY LLC	2245 LUNDY AVE	SAN JOSE	CA	95131
MARLONG INC	635 TRADE ZONE BLVD	MILPITAS	CA	95035
LAVORINI 2 LLC	PO BOX 394	PACIFIC GROVE	CA	93950
FORTUNE-LUNDY ASSOCIATES LLC	PO BOX 610910	SAN JOSE	CA	95161
MUSD	1331 E CALAVERAS BLVD	MILPITAS	CA	95035
TOLL WEST COAST LLC	6800 KOLL CENTER PKWY # 320	PHILO	CA	95466
ABOU-JEYAB TARIQ AND ELSHAIR MAISOUN ISSA M	317 EXPEDITION LN	MILPITAS	CA	95035
ADIJANTO RAYMOND	253 ODYSSEY LN	MILPITAS	CA	95035
ADIMULAM CHAKRI AND HIEN	2016 TRENTO LOOP	MILPITAS	CA	95035
ADMAL DIVYA AND ANIL REDDY	1896 TRENTO LOOP	MILPITAS	CA	95035
AGARWAL KISHITA AND ABHISHEK	330 EXPEDITION LN	MILPITAS	CA	95035
AGARWAL, NIKHIL; AGARWAL, SHRUTI	1907 TRENTO LOOP	MILPITAS	CA	95035
AGARWAL, RAJAT; HALLAN, SHIKHA	1995 TRENTO LOOP	MILPITAS	CA	95035
AGRAWAL MANISH C AND GOYAL NAMITA	369 EXPEDITION LN	MILPITAS	CA	95035
AGRAWAL, VAIBHAV AJAY; BANSAL, ANJALI	1960 MOMENTUM DR	MILPITAS	CA	95035
AICH BISHWAJIT AND MALVIYA ABHA	227 CURRLIN CIR	MILPITAS	CA	95035
AJJAMMANAVAR ANILKUMAR AND GOWDER CHAMPA K	1931 TRENTO LOOP	MILPITAS	CA	95035
ALAYAN HUSSEIN	1935 JOURNEY ST	MILPITAS	CA	95035
AMPARO CLARO BUDGIE B (TRUSTEE)	559 ODYSSEY LN	MILPITAS	CA	95035
ANANTAPALLY VENKATA RAVI S AND PASUPARTHY S	1972 MOMENTUM DR	MILPITAS	CA	95035

TABLE E-2 PROPERTY OWNERS WITHIN 1,000 FEET OF PROJECT SITE AND 500 FEET OF LINEARS				
Name	**Address**	**City**	**State**	**Zip**
ARNOLD ROBERT C	172 CURRLIN CIR	MILPITAS	CA	95035
ASWANI, PRADEEP; ASWANI, JUHI	47609 AVALON HEIGHTS TER	FREMONT	CA	94539
BALAGERE DHANUR S AND IYENGAR REETHI N	1905 TRENTO LOOP	MILPITAS	CA	95035
BALAKRISHNAN BIJESH KURUNGOTE AND JAYANARSI	152 CURRLIN CIR	MILPITAS	CA	95035
BALAKRISHNAN, SATHYANARAYANAN; SUBRAMANIAN, GNANAMBIKA	264 CURRLIN CIR	MILPITAS	CA	95035
BALAKUMAR, ARAVINDKUMAR; PANDIYAN, SANJANA SOUNDARA	14675 NE 16TH ST	BELLEVUE	WA	98007
BANDLA VENKATA AND YERRA LAKSHMI P	1957 TRENTO LOOP	MILPITAS	CA	95035
BANSAL, VIPIN; SEKRA, PRATIBHA	1952 MOMENTUM DR	MILPITAS	CA	95035
BANSUAN ANNA M	325 ODYSSEY LN	MILPITAS	CA	95035
BEDARE, SANKET VASANT; BANAKAR, VINITA	244 CURRLIN CIR	MILPITAS	CA	95035
BHAMRI GAURAV AND TREHAN SHAVETA	1976 TRENTO LOOP	MILPITAS	CA	95035
BHANURI RHONIK REDDY AND GUDIPATI SAKURA RE	2000 TRENTO LOOP	MILPITAS	CA	95035
BHATIA, ALKA; PURI, SAURABH	284 CURRLIN CIR	MILPITAS	CA	95035
BHUTA JESAL R AND MEHTA MEERAL	1996 TRENTO LOOP	MILPITAS	CA	95035
BIJJA, RAJESH; GURRAM, BABITHA	353 EXPEDITION LN	MILPITAS	CA	95035
BORA ROHIT AND PITALE NEHA	326 EXPEDITION LN	MILPITAS	CA	95035
CAI ERTAI AND LIU SHIYU	2033 TRENTO LOOP	MILPITAS	CA	95035
CAKIR GORKEM (TRUSTEE)	1920 TRENTO LOOP	MILPITAS	CA	95035
CANTON CALVIN C; CANTON LIGAYA R	2032 SW PUTNAM DR	OAK HARBOR	WA	98277
CAO, SHIWEL	1983 JOURNEY ST	MILPITAS	CA	95035
CHADHA VINEET AND KUMAR LATIKA	327 ODYSSEY LN	MILPITAS	CA	95035
CHAN EMILY SUE-WAH (TRUSTEE)	29 WEEPINGRIDGE CT	SAN MATEO	CA	94402
CHAN NICOLE	271 CURRLIN CIR	MILPITAS	CA	95035
CHANDEKAR ANUP AND KAJAL	19400 SORENSON AVE	CUPERTINO	CA	95014
CHANDRAN KIRAN AND SRIDHARAN LATHA	1929 JOURNEY ST	MILPITAS	CA	95035
CHANG TONY	295 ODYSSEY LN	MILPITAS	CA	95035
CHANGLANI, NITIN A; CHANGLANI, POOJA NITIN	1907 MCCANDLESS DR	MILPITAS	CA	95035
CHEN JOSEPH YEICHUNG (TRUSTEE); CHEN GRACIE LIANG (TRUSTEE)	667 PRINCESS PL	MILPITAS	CA	95035
CHEN SHAW T AND SU-WEN (TRUSTEE)	351 TEMPO LN	MILPITAS	CA	95035
CHEN WEI	1978 TRENTO LOOP	MILPITAS	CA	95035
CHEN YANXIN	359 EXPEDITION LN	MILPITAS	CA	95035

TABLE E-2 PROPERTY OWNERS WITHIN 1,000 FEET OF PROJECT SITE AND 500 FEET OF LINEARS				
Name	**Address**	**City**	**State**	**Zip**
CHEN YI AND ZHUGE TANGNA	651 HILLSDALE AVE	SANTA CLARA	CA	95051
CHENG HUEY-LIN	1862 TRENTO LOOP	MILPITAS	CA	95035
CHENG SONGZHE AND SONG QIANQIAN	1978 MOMENTUM DR	MILPITAS	CA	95035
CHEUNG TSZ ON	1982 MOMENTUM DR	MILPITAS	CA	95035
CHHEDA BANKEEM AND APEKSHA (TRUSTEE)	1927 CADENCE LN	MILPITAS	CA	95035
CHHEDA DHAWAL AND DESAI VAISHNAVI	1935 CADENCE LN	MILPITAS	CA	95035
CHIKKKADE, KESHAVA KRISHNEGOWDA; CHANDRASHEKAR, BHAVANI	228 CURRLIN CIR	MILPITAS	CA	95035
CHOU, KEVIN; LU, SHARON	1610 ARDENWOOD DR	SAN JOSE	CA	95129
CURRENT RESIDENT	1073 FOXGLOVE PL #103	SAN JOSE	CA	95131
DAFTARDAR SUVIDYA S AND BURHADE ASHWINI	208 CURRLIN CIR	MILPITAS	CA	95035
DALAL NISHAD AND PARIKH RAJASHI	575 ODYSSEY LN	MILPITAS	CA	95035
DAMLE, AMOD; KULKARNI, RASHMI	1955 JOURNEY ST	MILPITAS	CA	95035
DANG, BOBBY; TU, CHINH THI	1961 JOURNEY ST	MILPITAS	CA	95035
DECHU SANDEEP AND ANNAM PADMA SRAVANI	359 ODYSSEY LN	MILPITAS	CA	95035
DENG, BOWEN; ZHENG, SHUWEN	1968 TRENTO LOOP	MILPITAS	CA	95035
DHARIA NIRAV S AND SWETAL A	355 TEMPO LN	MILPITAS	CA	95035
DHEKNE, CHINMAY SHRIKANT; CHANDURKAR, AVANI JITENDRA	1958 TRENTO LOOP	MILPITAS	CA	95035
DI YANFENG	1972 TRENTO LOOP	MILPITAS	CA	95035
DINH HIEN SI (TRUSTEE); VUONG NGA THU (TRUSTEE)	3879 REGABY PLACE CT	SAN JOSE	CA	95121
DOPPALAPUDI, RAGHU CHAITANYA; KONDAPANENI, SREE MAHALAKSHMI	1973 TRENTO LOOP	MILPITAS	CA	95035
DOSHI JAYNESH B AND APURVA J	207 CURRLIN CIR	MILPITAS	CA	95035
DOSHI NIRAV J	1963 JOURNEY ST	MILPITAS	CA	95035
DOSHI PARAG N AND SHAH MARGI	293 ODYSSEY LN	MILPITAS	CA	95035
DU JANIE AND HAN RICHARD W	1916 MOMENTUM DR	MILPITAS	CA	95035
DWIVEDI, NIKHILESH TRILOKINATH; DANIVASA, AKSHATA	251 CURRLIN CIR	MILPITAS	CA	95035
EASWAR ANIRUDH AND SHANKAR UTTHARA	1785 HAZELNUT LN	MILPITAS	CA	95035
ELKHOULY ESSAM AND BAIYA DOUNIA	386 EXPEDITION LN	MILPITAS	CA	95035
FAN LIANGYI AND LI MENG	396 EXPEDITION LN	MILPITAS	CA	95035
FAYAZI AZADEH AND HOOSHDAR SINA	508 ODYSSEY LN	MILPITAS	CA	95035

TABLE E-2 PROPERTY OWNERS WITHIN 1,000 FEET OF PROJECT SITE AND 500 FEET OF LINEARS				
Name	**Address**	**City**	**State**	**Zip**
FELIZARDO, VINICIUS DALY	1998 TRENTO LOOP	MILPITAS	CA	95035
FERNANDO DAMITHA AND SOYSA VIDAKNA	1837 TRENTO LOOP	MILPITAS	CA	95035
FESTING KIRK R AND ZHOU LING	2892 MESQUITE DR	SANTA CLARA	CA	95051
FOKIN VLADIMIR N AND FOKINA MARGARITA S	247 CURRLIN CIR	MILPITAS	CA	95035
FONG FRANK Q L AND MAY M Y	19920 MERRITT DR	CUPERTINO	CA	95014
GAHIRWAL SAMIR P AND THAKUR VEENA	279 ODYSSEY LN	MILPITAS	CA	95035
GANDHI NIKHIL N AND JOSHI RASHMI	2008 TRENTO LOOP	MILPITAS	CA	95035
GANEGEDARA THILAN AND DULANJALIE	1879 MCCANDLESS DR	MILPITAS	CA	95035
GAO SONG AND ZHANG AIMIN	1917 MOMENTUM DR	MILPITAS	CA	95035
GAO YING	308 TRENTO LN	MILPITAS	CA	95035
GAONKAR, NITIN GURUNATH; BANARSE, ADITI RAM	1925 CADENCE LN	MILPITAS	CA	95035
GARG GAURAV AND GOEL MANSI	1929 CADENCE LN	MILPITAS	CA	95035
GARG ROMIL AND GUPTA SUCHARU	1859 MCCANDLESS DR	MILPITAS	CA	95035
GE, JIA; XU, LI	1966 TRENTO LOOP	MILPITAS	CA	95035
GOPALAKRISHNAN SANKARA HARI AND SINGH SNIGD	336 EXPEDITION LN	MILPITAS	CA	95035
GORADIA HARNISH N	1911 MCCANDLESS DR	MILPITAS	CA	95035
GUJAR, PRAVEEN SWAMY RAO; RAO, VIDYA PISSAYE VIJENDER	1997 TRENTO LOOP	MILPITAS	CA	95035
GUO, RUIZHEN; WANG, LU	1886 TRENTO LOOP	MILPITAS	CA	95035
GUPTA ANKUR AND PAREKH RUCHI PARTHIV	1933 JOURNEY ST	MILPITAS	CA	95035
GUPTA NEERAJ AND AGGARWAL MADHURI	1967 JOURNEY ST	MILPITAS	CA	95035
GUPTA SHRUTI	506 ODYSSEY LN	MILPITAS	CA	95035
GUPTA, TANYA	357 ODYSSEY LN	MILPITAS	CA	95035
HA SANG WOO AND CHI HYE WON	1952 TRENTO LOOP	MILPITAS	CA	95035
HAN SHUO AND ZHANG JINGYU	335 TEMPO LN	MILPITAS	CA	95035
HANSON SCOTT ALAN AND CHAN CHING HAN	1857 TRENTO LOOP	MILPITAS	CA	95035
HATHI KAUSHIK AND LILADHAR-HATHI INDU	45945 SENTINEL PL	FREMONT	CA	94539
HEGDE SANTOSH K AND KUDVA PREETI J (TRUSTEE)	530 ODYSSEY LN	MILPITAS	CA	95035
HINES STEPHEN R AND NANDAGOPAL KIRUTHIGA	1951 MOMENTUM DR	MILPITAS	CA	95035
HOMELY LLC,	1209 EAGLE RIDGE WAY	MILPITAS	CA	95035
HORNG PATRICK	365 TRADE ZONE BLVD	MILPITAS	CA	95035
HSIAO RICHARD AND YIPING	6601 NEPTUNE CT	SAN JOSE	CA	95120
HSIEH, JASON; HSIEH, FANG YU	252 CURRLIN CIR	MILPITAS	CA	95035
HSU, I CHUNG; HSIA, WEI WEI	2027 TRENTO LOOP	MILPITAS	CA	95035

TABLE E-2 PROPERTY OWNERS WITHIN 1,000 FEET OF PROJECT SITE AND 500 FEET OF LINEARS				
Name	**Address**	**City**	**State**	**Zip**
HU JIASHENG AND ZHANG WANMING	192 CURRLIN CIR	MILPITAS	CA	95035
HU JIAYAO AND HE HAO	571 ODYSSEY LN	MILPITAS	CA	95035
HU JUNJIE AND ZHANG JIAQI	337 TEMPO LN	MILPITAS	CA	95035
HU LILY	528 ODYSSEY LN	MILPITAS	CA	95035
HU WEICHENG AND LI CHEN	291 ODYSSEY LN	MILPITAS	CA	95035
HUA JIA RUI AND PANG ANDREW JIN	1913 TRENTO LOOP	MILPITAS	CA	95035
HUYNH MICHAEL AND TIANNA	215 CURRLIN CIR	MILPITAS	CA	95035
HWANG ALINA TIFFANY; HWANG YUHFANG LIN	1989 TRENTO LOOP	MILPITAS	CA	95035
IYER BALAJI AND APARNA	1971 JOURNEY ST	MILPITAS	CA	95035
JAGOTA RAKESH AND SEEMA	2051 TRENTO LOOP	MILPITAS	CA	95035
JAIN PRASHANT D AND PORWAL JINI C (TRUSTEE)	1856 TRENTO LOOP	MILPITAS	CA	95035
JAIN, YASH	236 CURRLIN CIR	MILPITAS	CA	95035
JAYARAMAN, RAMESH; RAGHUNATH, SINDHU KRISHNAMURTHY	1966 MOMENTUM DR	MILPITAS	CA	95035
JENSEN, DEREK CRAIG; PETROVA, NADEZHDA GEORGIEVA	1890 TRENTO LOOP	MILPITAS	CA	95035
JETHANI CHANDRA P AND PURASWANI VARSHA	987 E HOMESTEAD RD	SUNNYVALE	CA	94087
JI CHRISTOPHER Y AND SHIH PEARL Y	1929 MOMENTUM DR	MILPITAS	CA	95035
JIANG, WEN JR; HUANG, WAN TING	1918 TRENTO LOOP	MILPITAS	CA	95035
JOO, JAKE; CHEONG, JANET	339 TEMPO LN	MILPITAS	CA	95035
JUANG HAROLD AND CHEN SZU T	297 ODYSSEY LN	MILPITAS	CA	95035
KALAVENDI SUNIL AND AYYALA-SOMAYAJULA ARCHA	303 ODYSSEY LN	MILPITAS	CA	95035
KALLU SHASHIKANTH REDDY (TRUSTEE); PASHAM SWAPNA REDDY (TRUSTEE)	1976 MOMENTUM DR	MILPITAS	CA	95035
KALRA NITIN AND BHAGAT GARIMA	1925 MOMENTUM DR	MILPITAS	CA	95035
KAMARAJ, GUNASEKARAN; ARUMUGAM, GEETHA RANI	311 EXPEDITION LN	MILPITAS	CA	95035
KANDA, HIMANSHU; JAIN, ANUBHA	3207 PICADILLY CT	PLEASANTON	CA	94588
KANNUSAMI, OM PRAKASH; RAJAGOPALAN, AISHWARYA DEVI	1955 TRENTO LOOP	MILPITAS	CA	95035
KAO, KELVIN; LIN, CHIN YING	1978 PACE WAY	MILPITAS	CA	95035
KAPOOR, VISHAL JUGESH; VIGAMAL, BHAWNA	307 ODYSSEY LN	MILPITAS	CA	95035
KARANDIKAR ASMITA AND DESHMUKH SATYAJIT S	275 ODYSSEY LN	MILPITAS	CA	95035
KARRY SATISH AND SARIPALLE MADHU	1181 VALLEY QUAIL CIR	SAN JOSE	CA	95120

TABLE E-2 PROPERTY OWNERS WITHIN 1,000 FEET OF PROJECT SITE AND 500 FEET OF LINEARS				
Name	**Address**	**City**	**State**	**Zip**
KESARI MALLIKARJUNA REDDY (TRUSTEE); KESARI JAYA LAKSHMI (TRUSTEE)	324 APACHE CT	FREMONT	CA	94539
KHANOLKAR AMIT S AND JADHAV VANDANA V	1916 TRENTO LOOP	MILPITAS	CA	95035
KIM JOHN KWANG AND INJA (TRUSTEE)	1211 SHADY POND LN	PLEASANTON	CA	94566
KIM, DAE HYUNG; LEE, YESEUL	2028 TRENTO LOOP	MILPITAS	CA	95035
KNIERIEM, MICHAEL; TO, KELLY	2018 TAROB CT	MILPITAS	CA	95035
KOLLA RADHIKA (TRUSTEE)	1923 MCCANDLESS DR	MILPITAS	CA	95035
KOPPUNURU KRISHNA K AND DASI LAKSHMI M	511 ARBORETUM WAY	BURLINGTON	MA	01803
KOSTICK RICHARD	259 ODYSSEY LN	MILPITAS	CA	95035
KUDO RYUHO AND TAKAGI ATSUKO	1878 TRENTO LOOP	MILPITAS	CA	95035
KUMAR ASHWINI AND SINHA ROOPAM	1927 TRENTO LOOP	MILPITAS	CA	95035
KUMAR GAURAV AND AGARWAL MUGDHA	120 HOLGER WAY	SAN JOSE	CA	95134
KUMAR PUNEETH SIMHA KADABA S AND DEVALAPALL	495 JUNIPERO ST	PLEASANTON	CA	94566
KUMAR, VIKASH; KONTIA, LATIKA	1953 TRENTO LOOP	MILPITAS	CA	95035
LAD, KUNAL; VENKATESH, ASHWINI	335 ODYSSEY LN	MILPITAS	CA	95035
LAI ALBERT; LOCK JENNIFER	1975 MOMENTUM DR	MILPITAS	CA	95035
LATHIA, CHIRAG ASHOK; LATHIA, BIJAL CHIRAG	1863 TRENTO LOOP	MILPITAS	CA	95035
LAU TINA (TRUSTEE)	1985 JOURNEY ST	MILPITAS	CA	95035
LEE BRIAN	1937 CADENCE LN	MILPITAS	CA	95035
LEE HSIANGCHEN	2048 LEE WAY	MILPITAS	CA	95035
LEE JASON	1980 PACE WAY	MILPITAS	CA	95035
LI GUANDUO AND HUANG XIN	355 EXPEDITION LN	MILPITAS	CA	95035
LI JIN	375 EXPEDITION LN	MILPITAS	CA	95035
LI QINGKUN AND LIANG SHAN	1987 MOMENTUM DR	MILPITAS	CA	95035
LI WEI-JEN (TRUSTEE); HSU ANNIE CHUN-WEI (TRUSTEE)	47484 AVALON HEIGHTS TER	FREMONT	CA	94539
LI YONGFENG AND SHI ZUNYA	510 ODYSSEY LN	MILPITAS	CA	95035
LI YUE AND QIAO YING	212 CURRLIN CIR	MILPITAS	CA	95035
LI, CHAOLUN	1861 TRENTO LOOP	MILPITAS	CA	95035
LIEW SHEAU SHAN	257 ODYSSEY LN	MILPITAS	CA	95035
LIN CHENG-HUI AND HUANG YI-LAN	519 ODYSSEY LN	MILPITAS	CA	95035
LIN JACK AND ONA MICHAEL P (TRUSTEE)	1923 JOURNEY ST	MILPITAS	CA	95035
LIN JERHAU AND CHEN HSIAO YU	523 ODYSSEY LN	MILPITAS	CA	95035
LIN TSAI YIN; KUO SALLY I-CHUN	1853 TRENTO LOOP	MILPITAS	CA	95035

TABLE E-2 PROPERTY OWNERS WITHIN 1,000 FEET OF PROJECT SITE AND 500 FEET OF LINEARS				
Name	**Address**	**City**	**State**	**Zip**
LIN YUN AND QIU ZE XIANG	511 ODYSSEY LN	MILPITAS	CA	95035
LIU JINGYE	1970 TRENTO LOOP	MILPITAS	CA	95035
LIU LU AND DENG YAOTING	255 ODYSSEY LN	MILPITAS	CA	95035
LIU MINGJIE AND YANG XIAOYUN	367 EXPEDITION LN	MILPITAS	CA	95035
LIU YANGSHUOSHEN	9637 OAK RESERVE LN	ELK GROVE	CA	95758
LIU, DARREN ZI LIANG	255 CURRLIN CIR	MILPITAS	CA	95035
LO SIO ON AND LEONG HO KUAN	1913 MOMENTUM DR	MILPITAS	CA	95035
LONDHE ARUN GAJANAN (TRUSTEE); LONDHE VEENA ARUN (TRUSTEE)	860 CORRIENTE POINT DR	REDWOOD CITY	CA	94065
LOPEZ, DAVID; MCGOWAN, HIKARU	368 EXPEDITION LN	MILPITAS	CA	95035
LU YU AND CHENG CHAO	503 ODYSSEY LN	MILPITAS	CA	95035
LUO JI AND MA YINJIE	1143 MUNICH TER	SUNNYVALE	CA	94089
MACZKA, MICHAEL; HU, MARIANA	360 EXPEDITION LN	MILPITAS	CA	95035
MADHAVAN AJAY AND KANTHI DHIVYA	2725 TRANQUILITY ST	SAN JOSE	CA	95122
MAGODIA RAKESH AND GEETANJALI	357 EXPEDITION LN	MILPITAS	CA	95035
MAHABALESWARA PRAVEEN K	1871 MCCANDLESS DR	MILPITAS	CA	95035
MAHAJAN, ANKIT; MAHAJAN, PALLAVI	1938 TRENTO LOOP	MILPITAS	CA	95035
MAK STEPHEN W (TRUSTEE); MAK MARY M L (TRUSTEE)	PO BOX 360667	MILPITAS	CA	95036
MAKHMUDOV ALISHER	1922 TRENTO LOOP	MILPITAS	CA	95035
MALIK AJAY AND AHUJA RITU	527 ODYSSEY LN	MILPITAS	CA	95035
MALIK ALI I AND AMNA A	1911 JOURNEY ST	MILPITAS	CA	95035
MANDAVA NRUPEN AND LAVU NIKHILA	329 ODYSSEY LN	MILPITAS	CA	95035
MANE AVINASH AND PRABHU SONIA	325 EXPEDITION LN	MILPITAS	CA	95035
MANGAL, NITIN; NATANI, MEGHA	1912 MOMENTUM DR	MILPITAS	CA	95035
MANOHAR PAVAN G AND KAMPLI SHEHASHREE A	1855 TRENTO LOOP	MILPITAS	CA	95035
MEDAPATI BHASKARA R AND BRUNDAVANAM DURGA P	1996 MOMENTUM DR	MILPITAS	CA	95035
MEHTA, ANAND; VAISHNAV, LOMA	2038 TRENTO LOOP	MILPITAS	CA	95035
MILLER JULIE L	1971 MOMENTUM DR	MILPITAS	CA	95035
MILPITAS CITY OF	455 E CALAVERAS BLVD	MILPITAS	CA	95035
MINDE, ABHISHEK PRAKASH; PATIL, BHAGYASHRI	363 TEMPO LN	MILPITAS	CA	95035
MOHAN DIVYA AND GOPINATHAN PRASANTH CHATHEM	390 EXPEDITION LN	MILPITAS	CA	95035
MOHASSEL PAYMAN AND GAROUSI GOLARA	1831 HURST AVE	SAN JOSE	CA	95125

TABLE E-2 PROPERTY OWNERS WITHIN 1,000 FEET OF PROJECT SITE AND 500 FEET OF LINEARS				
Name	**Address**	**City**	**State**	**Zip**
MOHDSALLEH MURNI AND YAAKOB AHMAD Y	1935 TRENTO LOOP	MILPITAS	CA	95035
MOUSTAFA IMAN S AND ENAN WAEL	353 ODYSSEY LN	MILPITAS	CA	95035
MUKHERJEE, RAJADITYA; SANYAL, ANGIRA	338 EXPEDITION LN	MILPITAS	CA	95035
MURAMOTO KYLE N	1911 CADENCE LN	MILPITAS	CA	95035
MURDESHWAR RAVIRAJ S (TRUSTEE); MURDESHWAR RUPA R (TRUSTEE)	40686 AMBAR PL	FREMONT	CA	94539
MURRIETA, GRAY W; MURRIETA, JOETTA L	281 ODYSSEY LN	MILPITAS	CA	95035
NAGARMAT TEJAS AND GULWADI NAMRATA S	1963 MOMENTUM DR	MILPITAS	CA	95035
NAIR GOKUL P AND AGRAWAL AMISHA	2031 TRENTO LOOP	MILPITAS	CA	95035
NALLAMUTHU ANANTH M AND BHIMPURE ROHINI A	1976 PACE WAY	MILPITAS	CA	95035
NAMBIAR ASHWIN AND NAYAK MADHURA	375 TRADE ZONE BLVD	MILPITAS	CA	95035
NANDULA LOKESH AND CHARUVU SRILATHA	2005 TRENTO LOOP	MILPITAS	CA	95035
NEKKONDI NANJUNDESWAR AND KRISHNAPPA PAVITH	1971 TRENTO LOOP	MILPITAS	CA	95035
NELLIKAR, SURAJ; JAIN, PRANAMYA	333 TEMPO LN	MILPITAS	CA	95035
NGUYEN ERICK	311 ODYSSEY LN	MILPITAS	CA	95035
NIMMAGADDA PAVAN K AND KUMAR ANUSHA	2002 TRENTO LOOP	MILPITAS	CA	95035
NITISAROJ RATTIMA AND PONGCHANA NOPPAKET	583 ODYSSEY LN	MILPITAS	CA	95035
OSWAL, ANAND; OSWAL, PRAGATI	830 OAK MANOR CT	PLEASANTON	CA	94566
PADMANABHAN DEEPA AND NANDAKUMAR VIVEK S	359 TEMPO LN	MILPITAS	CA	95035
PALADUGU RANGA S	1992 MOMENTUM DR	MILPITAS	CA	95035
PALKAR PRIYAL	1931 JOURNEY ST	MILPITAS	CA	95035
PAN YUE	1991 MOMENTUM DR	MILPITAS	CA	95035
PAN ZHEN AND WANG LINGXIAO	315 EXPEDITION LN	MILPITAS	CA	95035
PARISE SWATHI AND SHAIK NAVEEN	1739 HOURET CT	MILPITAS	CA	95035
PARTHASARATHY, RANJAN; RANJAN PARTHASARATHY TRUST,	2216 EMERALD HILLS CIR	SAN JOSE	CA	95131
PATEL KASHYAP AND PANDYA MANALI	261 ODYSSEY LN	MILPITAS	CA	95035
PATEL PRATIK AND TEJURA AMI	287 ODYSSEY LN	MILPITAS	CA	95035
PATEL, CHIRAGKUMAR RASIKBHAI; PATEL, NIDHI CHIRAGKUMAR	331 ODYSSEY LN	MILPITAS	CA	95035
PATEL, JIGNASA V	263 ODYSSEY LN	MILPITAS	CA	95035
PATHAK, KANISHKA; KOWSHAL, PAPIA	1919 MCCANDLESS DR	MILPITAS	CA	95035
PATNI SANJAY AND VEENA	1895 MCCANDLESS DR	MILPITAS	CA	95035
PATWARDHAN SOURABH S	1912 TRENTO LOOP	MILPITAS	CA	95035

TABLE E-2 PROPERTY OWNERS WITHIN 1,000 FEET OF PROJECT SITE AND 500 FEET OF LINEARS				
Name	**Address**	**City**	**State**	**Zip**
PAUL, PRAKASH; PAUL, SUSAN	216 CURRLIN CIR	MILPITAS	CA	95035
PENGO ERIOLA (TRUSTEE)	337 ODYSSEY LN	MILPITAS	CA	95035
PHIRKE MANOJ P AND NARKHEDE PRIYANKA A TRUS	535 ODYSSEY LN	MILPITAS	CA	95035
PING ZHAN	1959 MOMENTUM DR	MILPITAS	CA	95035
PIONEER MATERIAL PRECISION	2025 TRENTO LOOP	MILPITAS	CA	95035
PIONEER MATERIAL PRECISION	2247 RINGWOOD AVE	SAN JOSE	CA	95131
PIONEER MATERIAL PRECISION TECH INC	1962 MOMENTUM DR	MILPITAS	CA	95035
PIONEER MATERIAL PRECISION TECH INC	1981 TRENTO LOOP	MILPITAS	CA	95035
PIONEER MATERIAL PRECISION TECH INC	2247 RINGWOOD AVE	SAN JOSE	CA	95131
POUDEL SANJAYA AND POKHAREL SHEELA	2060 LEE WAY	MILPITAS	CA	95035
PRABHU, SALIL; PRABHU, MANISHA SALIL	156 CURRLIN CIR	MILPITAS	CA	95035
PRAKASAM KOWSHIK AND BASKAR NIVEDITHA	1859 TRENTO LOOP	MILPITAS	CA	95035
PU TIANHUI	108 OAKMONT FOREST DR	CEDAR PARK	TX	78613
QURESHI, AMAAD UDIN; QURESHI, SYEDA IQTRAB FATIMAH	276 CURRLIN CIR	MILPITAS	CA	95035
RAGHAVAN, SRIMANTH; RAMADOSS, NITYA SUBHADRA	328 EXPEDITION LN	MILPITAS	CA	95035
RAJAGOPAL KOUSHIK AND MOORTHY SANDHYA	1936 TRENTO LOOP	MILPITAS	CA	95035
RAMACHANDRA SWAROOP G AND TUPPADA SMITHA S	1909 JOURNEY ST	MILPITAS	CA	95035
RAMACHANDRAN, ROSHAN; PRABHAKARA, VIDYAPRIYA	1867 MCCANDLESS DR	MILPITAS	CA	95035
RAMASWAMY, KOTHANDA RAMAKUMAR; DOSS, PRIYADHARSHINI BHAGAVAN	567 ODYSSEY LN	MILPITAS	CA	95035
RATHI, ANUP; KALANI, DEEPIKA	289 ODYSSEY LN	MILPITAS	CA	95035
REDDY KATTA N AND MALATHI K; REDDY MEGAN K	1921 TRENTO LOOP	MILPITAS	CA	95035
REHMAN SHAKEEL U AND MINOT JULIE A	507 ODYSSEY LN	MILPITAS	CA	95035
RENGANATHAN, KARTHIK; VISWANATHAN, SWARNA	1882 TRENTO LOOP	MILPITAS	CA	95035
RENTAL OFFICE/MANAGER	20 DESCANSO DR	SAN JOSE	CA	95134
RODRIGUEZ JOSE JAVIER L AND LIU MARIELA YUH	307 TRENTO LN	MILPITAS	CA	95035
ROSTRATA PERRY R AND GINA M	1921 MOMENTUM DR	MILPITAS	CA	95035
SAHASRABUDHE, AMIT A; SAHASRABUDHE, SHEETAL AMIT	1880 TRENTO LOOP	MILPITAS	CA	95035
SAHASRABUDHE, AMIT ASHOK; SAHASRABUDHE, SHEETAL AMIT	4021 LOUVRE AVE	SAN JOSE	CA	95135
SAHNI KARAN	1930 MOMENTUM DR	MILPITAS	CA	95035
SAMDANI SAURABH A	271 ODYSSEY LN	MILPITAS	CA	95035

TABLE E-2 PROPERTY OWNERS WITHIN 1,000 FEET OF PROJECT SITE AND 500 FEET OF LINEARS				
Name	**Address**	**City**	**State**	**Zip**
SANKU NAVEEN KUMAR AND SUJITHA (TRUSTEE)	1988 MOMENTUM DR	MILPITAS	CA	95035
SARDA, ANKUR; KARKALA, SRIPRADHA	272 CURRLIN CIR	MILPITAS	CA	95035
SARKAR SAURAV AND SHUBHY NAMITA	373 EXPEDITION LN	MILPITAS	CA	95035
SEN ANUJIT AND DUTTA SHILPA	502 ODYSSEY LN	MILPITAS	CA	95035
SEO, YOUNG; KIM, NAYUN	1891 MCCANDLESS DR	MILPITAS	CA	95035
SHAH CHIRAG VALLAVBHAI AND PARIKH AVANI DHA	39771 SPADEFOOT	NEWARK	CA	94560
SHAH MANAN AND AVANI	1991 JOURNEY ST	MILPITAS	CA	95035
SHAH NEIL AND ABDOLLAH PEGAH	361 EXPEDITION LN	MILPITAS	CA	95035
SHAH VISHAL AND JALPA	1987 JOURNEY ST	MILPITAS	CA	95035
SHAHBHAG, KIRTHI; TAANK, SULAKSHAN	2032 TRENTO LOOP	MILPITAS	CA	95035
SHANG PENGJU	263 CURRLIN CIR	MILPITAS	CA	95035
SHARMA ADITYA	21814 BENETTI CT	CUPERTINO	CA	95014
SHARMA ATUL AND JOSHI PRERANA (TRUSTEE)	168 CURRLIN CIR	MILPITAS	CA	95035
SHEN, JIEXIANG; LIU, YANG	392 EXPEDITION LN	MILPITAS	CA	95035
SHEN, LI; LI, WEN	1933 MOMENTUM DR	MILPITAS	CA	95035
SHETH ARPAN P AND VARISA	1937 JOURNEY ST	MILPITAS	CA	95035
SHI TINGFANG	1992 LEE WAY	MILPITAS	CA	95035
SHIH, TAMMY MORGAN	362 EXPEDITION LN	MILPITAS	CA	95035
SHIVANNA YATHISH H AND GOWDA USHARANI PURA	309 EXPEDITION LN	MILPITAS	CA	95035
SHIVHARE, VIVEK; JAIN, RAJUL	367 TEMPO LN	MILPITAS	CA	95035
SHRIVASTAVA ASHISH AND URVASHI	1988 TRENTO LOOP	MILPITAS	CA	95035
SINGH SHASHANK AND POOJA	1956 TRENTO LOOP	MILPITAS	CA	95035
SINGH, MAHENDRA; WALIA, HARPREET	1926 MOMENTUM DR	MILPITAS	CA	95035
SIRISHE PRATHAP AND ANANTHARAJU SRAVANA N	1927 MCCANDLESS DR	MILPITAS	CA	95035
SO AYAKO Y	2056 LEE WAY	MILPITAS	CA	95035
SONG MIN K AND KWON SOO AH	371 EXPEDITION LN	MILPITAS	CA	95035
SONG RUIJIAO	398 EXPEDITION LN	MILPITAS	CA	95035
SONI, VIKRAMKUMAR H; PRIYANKA & VIKRAM SONI TRUST UDT DATED J,	45273 TOM BLALOCK ST #301	FREMONT	CA	94539
SRIDHAR RAJIV AND MATHIAS ANITA	184 CURRLIN CIR	MILPITAS	CA	95035
SRIVASTAVA ATUL K	1909 TRENTO LOOP	MILPITAS	CA	95035
SUBBIAN RAJU	2052 TRENTO LOOP	MILPITAS	CA	95035
SUBRAMANIAN, VISHNUVARTH; KANAKKAN, HEMAMALINI	1996 LEE WAY	MILPITAS	CA	95035

TABLE E-2 PROPERTY OWNERS WITHIN 1,000 FEET OF PROJECT SITE AND 500 FEET OF LINEARS				
Name	**Address**	**City**	**State**	**Zip**
SUDHEENDRA MANOJ AND SEETHARAM SURABHI	1985 TRENTO LOOP	MILPITAS	CA	95035
SUGABRAHMAM GIRIDHARAN AND GIRIDHARAN ABIRA	1921 JOURNEY ST	MILPITAS	CA	95035
SUHANE AMIT AND RAWAT RICHA	360 ODYSSEY LN	MILPITAS	CA	95035
SUN TING (TRUSTEE)	41812 MISSION CIELO CT	FREMONT	CA	94539
SUN XIAOLE AND LIU YUN	1927 JOURNEY ST	MILPITAS	CA	95035
SUN XIN	515 ODYSSEY LN	MILPITAS	CA	95035
SUN YUJIA	555 ODYSSEY LN	MILPITAS	CA	95035
SURAIAH, MADHUSUDHAN R DASAM; BANDI, JYOTHSNA	277 ODYSSEY LN	MILPITAS	CA	95035
TABARREJO MARK AND SAPEI SISKA	2698 DEER GRASS DR	MANTECA	CA	95337
TAI RICKY WING KEI AND LAM KA KI ANGELA	1967 TRENTO LOOP	MILPITAS	CA	95035
TAMMAREDDI HEMANTH AND GARAPATI DIVYA	329 EXPEDITION LN	MILPITAS	CA	95035
TAN LIEWEI AND WU PIAN (TRUSTEE)	14287 CHESTER AVE	SARATOGA	CA	95070
TANG, JIAPENG; HE, RAN	1929 TRENTO LOOP	MILPITAS	CA	95035
TANTAI NING	1860 TRENTO LOOP	MILPITAS	CA	95035
TENDULKAR SHAILESH ASHOK AND PATWARDHAN NEH	402 EXPEDITION LN	MILPITAS	CA	95035
TERZIEV, GEORGE; THE GEORGE TERZIEV REVOCABLE TRUST,	1965 JOURNEY ST	MILPITAS	CA	95035
THAKAR, VIKRAM; BAPAT, ANAGHA	1915 MCCANDLESS DR	MILPITAS	CA	95035
THAKKAR BHAVIK AND SONIMINDE KALYANI	1955 MOMENTUM DR	MILPITAS	CA	95035
THIRUMURUGAVEL, ILANGOVAN POONJOLAI; SEMWAL, PREETI	531 ODYSSEY LN	MILPITAS	CA	95035
THITE MALHAR AND TODKAR KAVITA	370 EXPEDITION LN	MILPITAS	CA	95035
THOMAS, PRITHVI; ABRAHAM, RINI	333 ODYSSEY LN	MILPITAS	CA	95035
THONGLIN SOMKIAT AND CHUAKRUNG SALINEE	551 ODYSSEY LN	MILPITAS	CA	95035
TIWARI NIRMAL AND PAYAK KEYUR	365 ODYSSEY LN	MILPITAS	CA	95035
TOGNI JOAO DANIEL AND BAVARESCO SIMONE	2006 TRENTO LOOP	MILPITAS	CA	95035
TOLL WEST COAST LLC	6800 KOLL CENTER PKWY	PLEASANTON	CA	95466
TOMAR ANIL AND ROHINI	160 CURRLIN CIR	MILPITAS	CA	95035
TONG TIANQI AND HU ZIWEI	2018 TRENTO LOOP	MILPITAS	CA	95035
TRAN MY LINH THI; VO MICHAEL	196 CURRLIN CIR	MILPITAS	CA	95035
TRAN, KIM; KIM TRAN LIVING TRUST,	563 ODYSSEY LN	MILPITAS	CA	95035
TRIEU PAUL VUONG AND CHELSEY CHAMP	313 EXPEDITION LN	MILPITAS	CA	95035
TUMMALA REDDY VIJAY K AND MALLADI SREE VARD	1969 TRENTO LOOP	MILPITAS	CA	95035

TABLE E-2 PROPERTY OWNERS WITHIN 1,000 FEET OF PROJECT SITE AND 500 FEET OF LINEARS				
Name	**Address**	**City**	**State**	**Zip**
TYAGI ANSHUL AND SHUBHITA	200 CURRLIN CIR	MILPITAS	CA	95035
UPADHYA YASHIKA	248 CURRLIN CIR	MILPITAS	CA	95035
VADALI VENKATA RAMA K AND JANDHYALA SRAVANT	1939 CADENCE LN	MILPITAS	CA	95035
VADDEPALLY RAJESH AND DASARI MOUNIKA	1990 MOMENTUM DR	MILPITAS	CA	95035
VAIDYA, ROHAN; KULKARNI, MINU	323 ODYSSEY LN	MILPITAS	CA	95035
VARGHESE GIJESH AND ABY GEETHU	1858 TRENTO LOOP	MILPITAS	CA	95035
VASUDEVARAJU ARUNKUMAR A	309 ODYSSEY LN	MILPITAS	CA	95035
VELUSAMY MATHUMATHI	1783 HAZELNUT LN	MILPITAS	CA	95035
VENKATA SUBBARAYA KUMAR D AND CHITTI PADMIN	1933 TRENTO LOOP	MILPITAS	CA	95035
VIJAYAKUMAR SURESH AND GANJI HARIKA	256 CURRLIN CIR	MILPITAS	CA	95035
VIJAYARAGHAVAN RAJESH AND VENKATADRI SMRITH	4208 THOROUGHBRED	CEDAR PARK	TX	78613
VIKAS, FNU; KUMARI NIMISHA, FNU	2003 TRENTO LOOP	MILPITAS	CA	95035
VUPPALA KRISHNA S AND HARI VENKATA M	366 EXPEDITION LN	MILPITAS	CA	95035
WANG DIANXUN	1909 MOMENTUM DR	MILPITAS	CA	95035
WANG HANCANG AND ZHANG ZHIHUA	219 CURRLIN CIR	MILPITAS	CA	95035
WANG PERRY H AND YI JU LEE	PO BOX 612588	SAN JOSE	CA	95161
WANG QIRUI AND ZHANG JIE	332 EXPEDITION LN	MILPITAS	CA	95035
WANG, YI; CHEN, YIJUN	1960 TRENTO LOOP	MILPITAS	CA	95035
WANG, ZI; DU, MENGNA	1979 MOMENTUM DR	MILPITAS	CA	95035
WIDJAJA BURHAN AND HUDIONO YUNALISA; WIDJAJA JUSTINE	41058 PEMENTEL CT	FREMONT	CA	94539
WONG VINCENT HO CHOI	2052 LEE WAY	MILPITAS	CA	95035
WU JASMINE	1967 MOMENTUM DR	MILPITAS	CA	95035
WU TIANYU; ZHOU SHUIER	1913 CADENCE LN	MILPITAS	CA	95035
WU YUMIN (TRUSTEE)	164 CURRLIN CIR	MILPITAS	CA	95035
WU, JIANZHANG; SUN, JIE	275 CURRLIN CIR	MILPITAS	CA	95035
WU, JIN; JIN WU REVOCABLE TRUST,	947 HICKS DR	SANTA CLARA	CA	95050
XIAO KANG AND HUANG LINGLIN	1939 JOURNEY ST	MILPITAS	CA	95035
XIAO XIXI	1920 MOMENTUM DR	MILPITAS	CA	95035
XIAO, JIXIONG; ZHANG, YANRUI	3057 61ST AVE SE	MERCER ISLAND	WA	98040
XIE JIANLEI AND HE MINXIA	11852 STONEY BAY CIR	CARMEL	IN	46033
XU BO AND CAI XIN (TRUSTEE)	323 EXPEDITION LN	MILPITAS	CA	95035
XU WEIYUAN AND BAO SHANQUAN	211 CURRLIN CIR	MILPITAS	CA	95035
XU XIAOQIAN	243 CURRLIN CIR	MILPITAS	CA	95035

TABLE E-2 PROPERTY OWNERS WITHIN 1,000 FEET OF PROJECT SITE AND 500 FEET OF LINEARS				
Name	**Address**	**City**	**State**	**Zip**
XU YANG AND XIE RONG	742 SANTA CECILIA TER	SUNNYVALE	CA	94085
XU YANJING AND TANG JIE	388 EXPEDITION LN	MILPITAS	CA	95035
YALAMARTHY KRISHNA V AND MAMIDIPAKA SITA S	2001 TRENTO LOOP	MILPITAS	CA	95035
YAN WENBO AND YANG MING	8122 LAKEPOINTE DR	PLANTATION	FL	33322
YANG HUEI-HUA; LIU KAI-CHU	1908 MOMENTUM DR	MILPITAS	CA	95035
YANG, DONG; MENG, YUAN	1866 TRENTO LOOP	MILPITAS	CA	95035
YANG, FANGHAN	1958 MOMENTUM DR	MILPITAS	CA	95035
YANG, HSUAN SHENG; FANG, EVANGELINE	331 TEMPO LN	MILPITAS	CA	95035
YAZADI, FAISAL; YAZADI, SHAKEELA	3318 HENRIETTE CT	SAN JOSE	CA	95135
YE, SIMING	2026 TRENTO LOOP	MILPITAS	CA	95035
YEUNG KA K	4181 TANAGER CMN	FREMONT	CA	94555
YOGI NITIN V	1892 TRENTO LOOP	MILPITAS	CA	95035
YU HAORAN AND YANG MAN	220 CURRLIN CIR	MILPITAS	CA	95035
YU KUAI AND CHEN JEN	355 TRADE ZONE BLVD	MILPITAS	CA	95035
YU RENFEI	1953 JOURNEY ST	MILPITAS	CA	95035
YU, CHI LI; FAN, CHIU HUI	1875 MCCANDLESS DR	MILPITAS	CA	95035
YU, LANG; LI, XIAO	1932 TRENTO LOOP	MILPITAS	CA	95035
YUAN ROBERT (TRUSTEE); YUAN KATHIE (TRUSTEE)	45293 RUTHERFORD TER	FREMONT	CA	94539
YUEN, WILLIAM D; XI, XIAOLIN SHELLY	1919 CADENCE LN	MILPITAS	CA	95035
ZACHARIA SHINU GEORGE AND GEORGE SNEHA SUSA	1931 CADENCE LN	MILPITAS	CA	95035
ZENG RUOCHEN AND DENG YUN	325 TEMPO LN	MILPITAS	CA	95035
ZHANG HONG AND LIANG LIYA	818 YAKIMA DR	FREMONT	CA	94539
ZHANG KEVIN C AND LIU YUNFEI	1983 MOMENTUM DR	MILPITAS	CA	95035
ZHANG LI	1959 JOURNEY ST	MILPITAS	CA	95035
ZHANG, CHAO; HUANG, HUIJUN	1999 TRENTO LOOP	MILPITAS	CA	95035
ZHAO PINJI	372 EXPEDITION LN	MILPITAS	CA	95035
ZHAO, JIFENG; DONG, LIUSI	1915 CADENCE LN	MILPITAS	CA	95035
ZHENG HANXUN	267 CURRLIN CIR	MILPITAS	CA	95035
ZHOU BIN AND YANG YINGLIN	4685 BORINA DR	SAN JOSE	CA	95129
ZHOU YI AND TONG YING	331 EXPEDITION LN	MILPITAS	CA	95035
ZHOU, WEN; KELIMU, ZUMALAITI	1956 MOMENTUM DR	MILPITAS	CA	95035
ZHU GUANGYU AND TAO YUE	2758 MONTECITO VISTA WAY	SAN JOSE	CA	95111
ZHU, CHUNYANG	312 TRENTO LN	MILPITAS	CA	95035

TABLE E-3 AGENCIES AND LIBRARIES

First Name	Last Name	Title	Agency	Address	City	State	Zip
TINA	GARG	PLANNER III	SAN JOSE PLANNING DIVISION	200 EAST SANTA CLARA STREET	SAN JOSE	CA	95113
DAVID	KEYON	PRINCIPAL PLANNER	SAN JOSE PLANNING, BUILDING & CODE ENFORCEMENT (PBCE)	200 EAST SANTA CLARA STREET	SAN JOSE	CA	95113
HENRY	HILKEN	DIRECTOR/OFFICER	BAY AREA AIR QUALITY MANAGEMENT DISTRICT, PANNING AND CLIMATE PROTECTION	375 BEALE STREET, SUITE 600	SAN FRANCISCO	CA	94105
ARIANA	HUSAIN	PRINCIPAL AIR ENGINEER	BAY AREA AIR QUALITY MANAGEMENT DISTRICT	375 BEALE STREET, SUITE 600	SAN FRANCISCO	CA	94105
KATHRIN A.	TURNER	ASSISSTANT ENGINEER II	SANTA CLARA VALLEY WATER DISTRICT	5750 ALMADEN EXPRESSWAY	SAN JOSE	CA	95118-3614
ERIN	CHAPPELL	REGIONAL MANAGER	CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE	2825 CORDELIA ROAD SUITE 100	FAIRFIELD	CA	94534
GERRY	HAAS	PROGRAM MANAGER	SANTA CLARA VALLEY HABITAT AGENCY	535 ALKIRE AVENUE	MORGAN HILL	CA	95037
RYAN	OLAH	DIVISION CHIEF	US FISH & WILDLIFE SERVICE, SACRAMENTO FISH & WILDLIFE OFFICE, COAST BAY DIVISION	2800 COTTAGE WAY, ROOM W2605	SACRAMENTO	CA	95825-1846
REBECCA	FANCHER		CALIFORNIA AIR RESOURCES BOARD	1001 I ST	SACRAMENTO	CA	95814
COURTNEY	GRAHAM		CALIFORNIA AIR RESOURCES BOARD	1001 I ST	SACRAMENTO	CA	95814
SIMON	BAKER	DIRECTOR, ENERGY DIVISION	CALIFORNIA PUBLIC UTILITIES COMMISSION	505 VAN NESS AVENUE	SAN FRANCISCO	CA	94102
BINAYA	SHRESTHA	SUBJECT MATTER EXPERT, PG&E	CALIFORNIA INDEPENDENT SYSTEM OPERATOR	250 OUTCROPPING WAY	FOLSOM	CA	95630
NED	THOMAS	PLANNING DIRECTOR	CITY OF MILPITAS PLANNING AND NEIGHBORHOOD SERVICES	455 EAST CALAVERAS BLVD.	MILPITAS	CA	95035
DAN	RIVAS		CALTRANS DISTRICT 4, OFFICE OF LOCAL ASSISTANCE	P.O. BOX 23660	OAKLAND	CA	94623-0660

TABLE E-3 AGENCIES AND LIBRARIES

First Name	Last Name	Title	Agency	Address	City	State	Zip
KEITH	LICHTEN	REGIONAL PROGRAM LEAD	SAN FRANCISCO BAY RWQCB	1515 CLAY SUITE 1400	OAKLAND	CA	94612
BRIAN	MCALOON		DEPT. OF TOXIC SUBSTANCES CONTROL	8800 CAL CENTER DRIVE	SACRAMENTO	CA	95826 -3200
			SAN FRANCISCO BAY CONSERVATION & DEVELOPMENT COMMISSION	375 BEALE STREET, SUITE 510	SAN FRANCISCO	CA	94105
JON	CICIRELLI		SAN JOSE PARKS, RECREATION AND NEIGHBORHOOD SERVICES	200 EAST SANTA CLARA STREET	SAN JOSE	CA	95113
		FIRE CHIEF	SAN JOSE FIRE DEPARTMENT	1661 SENTER RD.	SAN JOSE	CA	95112
		CHIEF OF POLICE	SAN JOSE POLICE DEPARTMENT	201 W. MISSION STREET	SAN JOSE	CA	95110
MANJIT	BANWAIT	SENIOR TRANSPORTATION SPECIALIST	SAN JOSE DEPARTMENT OF TRANSPORTATION	200 EAST SANTA CLARA STREET	SAN JOSE	CA	95113
RYAN	DO		SAN JOSE PUBLIC WORKS	200 EAST SANTA CLARA STREET	SAN JOSE	CA	95113
KERRY	ROMANOW		SAN JOSE ENVIRONMENTAL SERVICES	200 EAST SANTA CLARA STREET 10TH FLOOR TOWER	SAN JOSE	CA	95113
CHERISE	ORANGE	ASSOCIATE PLANNER	COUNTY OF SANTA CLARA PARKS AND RECREATION DEPARTMENT	298 GARDEN HILL DRIVE	LOS GATOS	CA	95032 -7669
KERRI	KISKO	ENVIRONMENTAL SCIENTIST	DEPARTMENT OF CONSERVATION	801 K STREET, MS 24-01	SACRAMENTO	CA	95814
WADE	CROWFOOT	SECRETARY	NATURAL RESOURCES AGENCY	715 P STREET	SACRAMENTO	CA	95814
PHILLIP	CRADER		STATE WATER RESOURCES CONTROL BOARD, WATER QUALITY DIVISION	P.O. BOX 100	SACRAMENTO	CA	95812 -0100
JAMES	BOOTH	DISTRICT CONSERVATIONIST	NATURAL RESOURCES CONSERVATION SERVICES	2337 TECHNOLOGY PKWY., SUITE C	HOLLISTER	CA	95023 -2544

TABLE E-3 AGENCIES AND LIBRARIES

First Name	Last Name	Title	Agency	Address	City	State	Zip
KARLA	NEMETH	DIRECTOR	DEPARTMENT OF WATER RESOURCES	P.O. BOX 942836	SACRAMENTO	CA	94236-0001
			COUNTY OF SANTA CLARA, OFFICE OF THE CLERK RECORDER	70 WEST HEDDING STREET	SAN JOSE	CA	95110
LAURA	MIRANDA	COMMISSIONER	NATIVE AMERICAN HERITAGE COMMISSION	1550 HARBOR BLVD, SUITE 100	WEST SACRAMENTO	CA	95691
JERRY	HUTCHISON	STRATEGIC ACCOUNT MANAGER	PACIFIC GAS AND ELECTRIC COMPANY	77 BEALE STREET	SAN FRANCISCO	CA	94105
ROY	MOLSEED	SENIOR ENVIRONMENTAL PLANNER	SANTA CLARA VALLEY TRANSPORTATION AUTHORITY	3331 NORTH FIRST STREET	SAN JOSE	CA	95134-1927
THERESE	MCMILLAN	EXECUTIVE DIRECTOR	ASSOCIATION OF BAY AREA GOVERNMENTS, BAY AREA METRO CENTER	375 BEALE STREET, SUITE 800	SAN FRANCISCO	CA	94105-2066
CRAIG	WEIGHTMAN	ENVIRONMENTAL PROGRAM MANAGER, WATER RIGHTS	CA DEPT OF FISH AND WILDLIFE	2825 CORDELIA ROAD SUITE 100	FAIRFIELD	CA	94534
DANIEL	WELSH	DEPUTY FIELD SUPERVISOR	US FISH AND WILDLIFE, SAN FRANCISCO BAY-DELTA FISH AND WILDLIFE OFFICE	650 CAPITOL MALL, SUITE 8-300	SACRAMENTO	CA	95814
			CEC - ENERGY LIBRARY	715 P STREET, MS-10	SACRAMENTO	CA	95814-5504
		GOV PUBLICATIONS	FRESNO COUNTY FREE LIBRARY	2420 MARIPOSA ST	FRESNO	CA	93721-2204
			HUMBOLDT COUNTY MAIN LIBRARY	1313 3RD STREET	EUREKA	CA	95501-0553
		SERIALS DIVISION	LOS ANGELES PUBLIC LIBRARY	630 W 5TH ST	LOS ANGELES	CA	90071-2002
		SCIENCE & INDUSTRY DIV	SAN DIEGO PUBLIC LIBRARY	330 PARK BLVD	SAN DIEGO	CA	92101-6478

TABLE E-3 AGENCIES AND LIBRARIES							
First Name	**Last Name**	**Title**	**Agency**	**Address**	**City**	**State**	**Zip**
		GOVERNMENT INFORMATION CENTER	SAN FRANCISCO PUBLIC LIBRARY	100 LARKIN ST	SAN FRANCISCO	CA	94102 -4733
		GOV PUBS	STANLEY MOSK LIBRARY & COURTS BLDG	914 CAPITOL MALL, 3RD FLOOR	SACRAMENTO	CA	95814
			MILPITAS LIBRARY	160 N MAIN STREET	MILPITAS	CA	95035