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2.7 Project Design Measures

C1 has incorporated the following design measures into the project to avoid environmental impacts. These measures apply to the SDC as a whole, including the SBGF, unless otherwise noted.

Air Quality

AQ-1: To assure fugitive dust impacts are less than significant, the Applicant will incorporate the BAAQMD's recommended BMPs as a project design feature. These project design features will include:

- All exposed surfaces (for example, parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material offsite shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved surfaces shall be limited to 15 miles per hour.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the Airborne Toxic Control Measure to Limit Diesel- Fueled Commercial Motor Vehicle Idling [Title 13, Section 2485, CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
- A publicly visible sign shall be posted with the telephone number and name of the person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

AQ-2: C1 commits to standard operating procedures that will limit operation for maintenance and testing to one generator at a time. It is C1's experience that maintenance and testing of each engine rarely exceeds 10 hours annually. **[SBGF only]**

Biological Resources

BIO-1: In order to reduce impacts to biological systems and communities, the following measures shall be implemented:

- Schedule tree removal activities between September 1 and January 31 (inclusive) to avoid the nesting season (including for raptors) and no additional surveys would be required.

- If construction tree removal would take place between February 1 and August 31, pre-construction surveys for nesting birds shall be completed by a qualified ornithologist to ensure that no nests will be disturbed.
- Surveys will be completed no more than seven days prior to the initiation of site clearing or construction activities. During this survey, the ornithologist will inspect all trees and other potential nesting habitats (e.g., shrubs) in and immediately adjacent to the construction area for nests.
- If an active nest is found sufficiently close to work areas to be disturbed by construction, the ornithologist will determine the extent of a disturbance-free buffer zone to be established around the nest (typically 250 feet for raptors and 50-100 feet for other species). This will ensure that no nests of species protected by the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code will be disturbed during project implementation.
- A report indicating the result of the survey and any designated buffer zones shall be submitted to the satisfaction of the Planning Department prior to the start of construction.

BIO-2: The following pre-construction and construction period measures shall be undertaken to avoid impacts to sensitive wildlife species:

- A qualified biologist shall conduct preconstruction surveys for burrowing owls prior to construction. Should these surveys identify burrowing owls on or near the SDC site, avoidance of disturbance to the burrow will be conducted as outlined below:
 - If an active burrowing owl nest is identified near a proposed work area, work will be conducted outside of the nesting season (March 15 to September 1).
 - If an active nest is identified near a proposed work area and work cannot be conducted outside of the nesting season, a qualified biologist will establish a no-activity zone. The no activity zone will be large enough to avoid nest abandonment and will at minimum be 250-foot radius from the nest.
 - If burrowing owls are present within the construction footprint during the non-breeding period, a qualified biologist will establish a no-activity zone of at least 150 feet.
 - If an effective no-activity zone cannot be established in either case, an experienced burrowing owl biologist will develop a site-specific plan (i.e., a plan that considers the type and extent of the proposed activity, the duration and timing of the activity, and the sensitivity and habituation of the owls, and the dissimilarity of the proposed activity with background activities) to minimize the potential to affect the reproductive success of the owls.
- Prior to construction, employees and contractors performing construction activities will receive environmental sensitivity training from a qualified wildlife biologist. Training will include review of environmental laws and avoidance and minimization measures that must be followed by all personnel to reduce or avoid effects on covered species during construction activities. A brief presentation by a qualified wildlife biologist will explain potential wildlife concerns to contractors, their employees, and agency personnel involved in the project. Fact sheets conveying this information and an educational brochure containing color photographs of

burrowing owls will be prepared for distribution to the above-mentioned people and anyone else who may enter the project area.

- Environmental tailboard trainings will take place on an as-needed basis in the field. The environmental tailboard trainings will include a brief review of the biology of the covered species and guidelines that must be followed by all personnel to reduce or avoid negative effects on these species during construction activities. Directors, Managers, Superintendents, and the crew foremen and forewomen will be responsible for ensuring that crewmembers comply with the guidelines.

Cultural Resources

CULT-1: A qualified archaeologist shall be on site to monitor grading and excavation of soil. The project applicant shall submit the name and qualifications of the selected archeologist to the Director of Community Development prior to the issuance of a grading permit. After monitoring the grading phase, the archaeologist shall make recommendations for further monitoring if it is determined that the site has or may have cultural resources. Recommendations for further monitoring shall be implemented during any remaining ground-disturbing activities. If the archaeologist determines that no resources are likely to be found on site, no additional monitoring shall be required. A letter report summarizing the results of the initial monitoring during site grading and any recommendations for further monitoring shall be provided to the Director of Community Development prior to onset of building construction.

CULT-2: If buried archeological resources are encountered during on-site construction activities, all activity within a 50-foot radius of the find shall be stopped, the Director of Community Development shall be notified, and a qualified archaeologist shall examine the find and make appropriate recommendations. Recommendations could include collection, recordation, and analysis of any significant cultural materials. A report of findings documenting any data recovery during monitoring shall then be submitted to the Director of Community Development.

CULT-3: In the event that human remains are discovered during SDC construction, all activity within a 50-foot radius of the site shall be halted. The Santa Clara County Coroner will be notified and shall make a determination as to whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the Coroner will notify the Native American Heritage Commission (NAHC) immediately. Once NAHC identifies the most likely descendants, the descendants will make recommendations regarding proper burial, which will be implemented in accordance with Section 15064.5(e) of the CEQA Guidelines. The descendants may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American human remains and may recommend to the owner or the person responsible for the excavation work means for treatment or disposition, with appropriate dignity, of the human remains and any associated grave goods. The descendants shall complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site.

Geology and Soils

GEO-1: To reduce the risk of damage to the SDC and SBGF as a result of geologic conditions at and near the SDC site, all recommendations outlined in the site-specific geotechnical investigation performed by Kleinfelder in October 2018 will be incorporated into the SDC and SBGF. These measures have been designed and will be incorporated to reduce the risk of settlement, liquefaction, and damage from expansive soils to ensure that users of the project are not exposed to a significant safety risks as a result of the SDC and SBGF. These measures are listed in full in **Appendix E**. The mat slab foundation has been designed to CBC seismic standards.

GEO-2: A Worker Environmental Awareness Training Program will be implemented, which will provide training to construction personnel regarding proper procedures (including identification and notification) in the event fossil materials are encountered during construction.

Greenhouse Gas Emissions

GHG-1: BAAQMD construction-period BMPs would be implemented to reduce GHG emissions during construction, as feasible and applicable. BMPs may include use of alternative-fueled (for example, biodiesel 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.

GHG-2: To reduce GHG emissions and the use of energy related to building operations, the SDC chillers would be installed with variable frequency drives to provide efficient operation. **[SDC only]**

GHG-3: Water use reduction measures are also be incorporated in the building design, including the use of air-cooled chillers. Development standards for water conservation would be applied to increase efficiency in indoor and outdoor water use areas. Furthermore, SDC and SBGF would comply with all applicable City and state water conservation (indoor and outdoor) measures, including Title 24 baseline standard requirements for energy efficiency, based on the 2019 Energy Efficiency Standards requirements, and CALGreen. For SDC and SBGF, these measures would include **[SDC only]**:

- Water efficient landscaping that is drought tolerant and low maintenance, consisting of native and regionally appropriate trees, shrubs, and groundcover to minimize irrigation requirements
- Use of air-cooled chillers that do not consume water annually

GHG-4: SDC and SBGF would be required to participate in the City's Construction and Demolition Debris Recycling Program by recycling or diverting at least 50 percent of waste materials generated. Additionally, as mitigation incorporated into the project, at least 75 percent of construction waste would be diverted and high-recycled content material would be used where feasible.

GHG-5: As a condition of approval, SDC and SBGF construction would follow BAAQMD construction BMPs including limiting idling times to 5 minutes or less and limiting vehicle speeds to 15 miles per hour or less.

GHG-6: If required by the City as a design review condition, solar panels would be installed at the SDC. **[SDC only]**

GHG-7: SDC would include bicycle and pedestrian amenities consistent with the City's requirements. **[SDC only]**

GHG-8: SDC would include electrical vehicle charging stations. **[SDC only]**

GHG-9: SDC would use lighting control to reduce energy usage for new exterior lighting and air economization for building cooling. Water efficient landscaping and ultra-low flow plumbing fixtures in the proposed building would limit water consumption. In addition, SDC would have a "Cool Roof," using reflective surfaces to reduce heat gains. Waterside economizers would be used to cool data center loads. **[SDC only]**

GHG-10: SDC has a Power Usage Effectiveness of 1.23 and an average rack power rating range of 8 to 10 kilowatts. **[SDC only]**

Hazards and Hazardous Materials

HAZ-1: If contaminated soils from agricultural or industrial use are unexpectedly encountered during any construction activities, work in the area shall be temporarily halted and the corresponding jurisdiction (the City) shall coordinate with the contractor and the Alameda County Environmental Health Department to determine appropriate treatment and removal of contaminated soils.

Noise and Vibration

NOI-1: The applicant shall complete a design level acoustical analysis and include appropriate site and building design, building construction, and noise attenuation techniques to ensure that the SDC's rooftop mechanical equipment meets the City's applicable exterior noise standard at the adjacent land uses. A qualified acoustical consultant shall review the final site plan, building elevations, and roof plan prior to issuance of a building permit to calculate the expected exterior noise levels at nearby land uses and require appropriate noise shielding. The applicant shall implement all recommendations of the acoustical analysis, which may include but not be limited to rooftop screening and/or acoustical wraps. In addition to the noise attenuation techniques that may be identified in the design level acoustical analysis, C1 shall consider the following potential feasible measures that are capable of meeting the City's applicable noise performance standard **[SDC only]**:

In the realm of physical acoustical screening (like a noise wall), the use of a Perforated Fiberglass Sound-Absorptive Noise Barrier System would allow for a lightweight screening. This solution would provide efficient performance, as the wall system contains no gaps due to its tongue-and-groove design in 12-inch wide segments. This material features a noise reduction coefficient (NRC) rating of 1.05 and sound transmission class (STC) rating of 35. This results in a noise reduction of up to 25 dBA. For application at the SDC, screening would be provided at the perimeter of the rooftop

platforms surrounding the air-cooled chillers. The screening walls would be approximately 8 feet high to align with the top of the chiller units.

Noise attenuation wraps for air cooled chillers can be used to produce noise reductions of 4 dBA to about 10 dBA. HUSH COVER™ removable sound blankets attenuate overall decibels and some tonal frequencies. Each chiller would be fitted with the HUSH CORE screw chiller noise reduction system or equal. The chiller noise reduction system to be applied to the suction and discharge piping, compressor housing, and oil separators would be a removable blanket insulation with Velcro flaps. The insulation mass shall be 3 pounds per square foot and shall be applied with 100 percent coverage. The noise reduction product shall be furnished and installed by the manufacturer.

Tribal Cultural Resources

TRIBE-1: A Native American monitor shall be retained to monitor all project-related, ground-disturbing construction activities (e.g., boring, grading, excavation, drilling, trenching). The appropriate Native American monitor shall be selected based on consultation between the City and the NAHC or as a part of AB 52 consultation (if requested).¹ Monitoring procedures and the role and responsibilities of the Native American monitor shall be outlined in a document submitted to the City prior to construction. In the event the Native American monitor identifies cultural or archeological resources, the monitor shall be given the authority to temporarily halt construction (if safe) within 50 feet of the discovery to investigate the find and contact the assigned on-site archeologist (if not present). The Native American monitor shall be provided an opportunity to participate in the documentation and evaluation of the find. If a Treatment Plan or Data Recovery Plan is prepared, the Native American monitor shall be provided an opportunity to review and provide input on the Plan.

¹ In accordance with Section 21080.3.1 of the California Public Resources Code and AB 52, the City has provided a Notice of Opportunity to Native American tribes to request consultation for projects within the city. To date, the City has not received any requests from regional tribes to be included on the AB 52 list.