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5 Alternatives

5.1 Introduction

This section discusses alternatives to the proposed Compass Energy Storage Project (Project). These include the No Project - No Development Alternative (herein referred to as the No Development-No Project Alternative), the No Project - Buildout as Contemplated in the City of San Juan Capistrano's General Plan Alternative (herein referred to as the Buildout No Project Alternative) and the Reduced Project Alternative. This discussion focuses on alternatives that could feasibly accomplish most of the basic objectives of the Project and could avoid or substantially lessen one or more of the potential impacts.

The California Environmental Quality Act (CEQA) requires consideration of "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 but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives" (Title 14, California Code of Regulations [CCR] 15126.6[a]).

Thus, the focus of an alternatives analysis should be on alternatives that "could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects" (Title 14, CCR 15126.6[c]). The CEQA Guidelines further provide that "among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts."

The Energy Facilities Siting Regulations (Title 20, CCR, Appendix B) guidelines titled Information Requirements for an Application require the following:

> A discussion of the range of reasonable alternatives to the project, including the no project alternative… which would 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.

The data adequacy regulations also require the following:

> A discussion of the applicant's site selection criteria, any alternative sites considered for the project, and the reasons why the applicant chose the proposed site.

A range of reasonable alternatives are identified and evaluated in this section, including two "no project" alternative scenarios (i.e., the No Development-No Project Alternative and the Buildout-No Project Alternative), and the Reduced Project Alternative. This section also describes the site selection criteria used in determining the proposed location of the Project and a discussion of alternative technologies.

5.2 Project Objectives

As described in Section 1.1, the Project's basic project objectives include the following:

- Develop a utility-scale battery energy storage system with a rated capacity of up to 250 megawatts (MW) and up to 1,000 megawatt hours (MWh) to reliably capture and manage electricity in an economically feasible and commercially financeable manner.
- Use a proven and established battery energy storage system technology that is safe, efficient, commercially available, and has low maintenance requirements.
- Locate a utility-scale battery energy storage system in an area that maximizes electricity delivery to the 138kV Trabuco to Capistrano transmission line, satisfies the CAISO deliverability requirements to sell Resource Adequacy, and is capable of being completed by summer 2026.
- Assist California by facilitating deployment of additional renewable energy resources in furtherance of:
  - U.S. Department of Energy (DOE's) goals and targets to reduce the cost of grid-scale, long-duration energy storage and accelerate breakthroughs that store clean electricity to make it available anytime, anywhere and support more abundant, affordable, and reliable clean energy solutions.
  - Federal Sustainability Plan goal of 100 percent clean electricity by 2035.
  - California's Renewables Portfolio Standard (RPS) and climate objectives, as mandated under Senate Bill 100 and Governor Newsom's California Clean Energy Transition Plan, by providing energy storage that allows RPS-qualified renewable electricity to be stored and discharged to the market according to upon demand and displacing an older and less efficient generation.
  - Other state goals to expedite development of renewable energy and storage. In 2022, California legislature set intermediate targets of 90% renewable energy and zero-carbon electricity by the end of 2035 and 95 percent by the end of 2040 on the way to the eventual target of 100 percent by 2045.
  - California Energy Commission (CEC) goals and targets for renewable energy and storage to meet California's goal of zero carbon emissions by 2045.
  - California Public Utilities Commission (CPUC) adopted Decision 21-06-035 recognizing the need for energy storage resources.
  - City of San Juan Capistrano and Orange County's clean energy goals.
- Create reliable, dispatchable generation as a firm, dispatchable resource for southern Orange County by increasing the ability of load-serving entities and system operators to effectively manage intermittent renewable generation on the grid.
- Provide economic benefit to the City of San Juan Capistrano and Orange County through construction jobs, property and sales taxes, construction and maintenance services, community benefits, and increased energy reliability.
- Design the Project in a manner that will minimize adverse impacts to natural resources, reduce carbon emissions and improve air quality, including but not limited to Oso Creek and improving public facilities, including but not limited to fire protection resources.

5.3 Project Site

The Project will be located on an approximately 12.4-acres of an approximately 40.8-acre parcel identified as Parcel B1 within Assessor Parcel Number (APN) 637-082-71 in the City of San Juan Capistrano. The Project would also

include an offsite access road comprising approximately 1.6 acres, a total Project area of approximately 14 acres. The Project site is located in the northern portion of the City, adjacent to Camino Capistrano with Interstate-5 (I-5) located to the east. The Project site is currently disturbed utilized by the prior owner, Saddleback Church, for ancillary activities and is adjacent to the Saddleback Church Rancho Capistrano to the north, mostly open space to the south, Oso Creek to the south and east, Metrolink Railroad and I-5 to the east, and open space residences outside of the City limits to the west. The San Diego Gas and Electric (SDG&E) Trabuco to Capistrano 138 kV transmission line is located approximately 500 feet to the east and runs alongside the Metrolink Railroad tracks.

The proposed Project will include lithium-iron phosphate, or similar technology, batteries, inverters, medium voltage (MV) transformers, a switchyard, a collector substation, and other associated equipment to interconnect into the SDG&E Trabuco to Capistrano 138 KV transmission line (Point of Interconnection). The switchyard will be owned by SDG&E. The batteries will be installed in non-habitable enclosures. The enclosures will have battery storage racks, with relay and communications systems for remote, automated monitoring and management of the batteries. The battery energy storage system will also include a battery management system to control the charging and discharging of the batteries, along with temperature monitoring and control of individual battery cell temperature with an integrated cooling system. Batteries operate with direct current (DC) electricity, which must be converted to alternating current (AC) for compatibility with the existing electric grid. Power inverters to convert between AC and DC, along with transformers to step up the voltage, will be included as part of the Project.

The Project will connect to the SDG&E electric transmission system. Electric energy would be transferred from the SDG&E Trabuco to Capistrano 138 KV transmission line to the Project batteries for storage and from the Project batteries to the SDG&E Trabuco to Capistrano 138 KV transmission line when additional electricity is needed. Following construction, the energy storage system will not generate air quality emissions, will not require sanitary facilities, will generate minimal vehicle trips, and will only require water for landscape irrigation and to supply on-site fire hydrants.

The Project will be located on a site that is designated as LU 9.6 PC Planned Community in the City of San Juan Capistrano General Plan (City of San Juan Capistrano 1999) and as PC – Planned Community District in the City of San Juan Capistrano Zoning Ordinance. The areas to the north and south of the site are designated Planned Community. The site is expected to be a conforming land use and has adequate space for all of the aboveground battery energy storage system facilities as the project would utilize approximately 14 acres of property consisting of access roads, substation area, and battery storage area. The Project has been designed to avoid jurisdictional waters, such as Oso Creek, and existing protected open space.

It should be noted that the Project has been through multiple design iterations over the past three years since initial consideration. Due to land control constraints the Project extent was initially focused within a 13-acre area that would have required geotechnical improvements involving extensive grading and excavation, as well as installation of above ground and subterranean retaining walls. The geotechnical improvements were previously necessary to fit 13 acres of a BESS project within the land available to the Applicant at the time to address constraints posed by the sloped hillside to the west and Oso Creek to the east.

The applicant was able to obtain additional acreage to the north of the original site such that the current site plan of the proposed Project has been redesigned to avoid impacting slopes to the west and to provide a larger buffer to Oso Creek to the east. This design avoids having to complete the extensive geotechnical improvements initially contemplated. The Project design considered in this application will result in significantly less environmental impacts related to site grading and excavation, will no longer require retaining walls on the west or any subterranean walls.

5.4 Rationale for Alternatives Selection

The following discussion covers a reasonable range of feasible alternatives that would avoid or substantially lessen one or more significant effects of the Project while attaining most of the Project objectives. According to the CEQA Guidelines, many factors may be taken into account when addressing the feasibility of alternatives, such as environmental impacts, site suitability as it pertains to various land use designations or zoning, economic viability, availability of infrastructure, regulatory limitations, and jurisdictional boundaries (CEQA Guidelines, 15126.6(f)(1)).

In order to identify a reasonable range of alternatives to the Project, a broad range of alternatives were reviewed. Based on initial review and consideration, it was determined that some of these preliminary alternatives did not accomplish most of the objectives, as listed above, or would result in greater impacts than the Project. Thus, these alternatives were rejected and were not fully analyzed. The alternatives that were considered and rejected are discussed in Section 5.5 below.

One alternative would meet most of the project objectives, is potentially feasible, and would avoid or substantially lessen some impacts as compared to the Project. This alternative is the Reduced Project Alternative. Additionally, a No Project Alternative is required to be included in the range of alternatives. Under the No Project Alternative, two scenarios are analyzed: 1) No Development-No Project Alternative and 2) Buildout No Project Alternative.

The three alternatives, as listed below, are fully analyzed. For each of these alternatives, the analysis includes a description of the alternative and a comparison of the environmental effects relative to the Project. These Project alternatives are addressed in Sections 5.6 and 5.7 in this section as follows:

- **Alternative 1:** No Development-No Project Alternative
- **Alternative 2:** Buildout No Project Alternative
- **Alternative 3:** Reduced Project Alternative

The alternatives studied constitute a reasonable range because they contain enough variation to facilitate informed decision making that leads to a reasoned choice. Also, the discussion of each alternative is sufficient to allow meaningful evaluation, analysis, and comparison with the Project. Therefore, the significant effects of each alternative are discussed in less detail than those of the Project, but in enough detail to provide the CEC with perspective and a reasoned choice among alternatives to the Project.

The Project would result in no significant and unavoidable adverse impacts for which feasible mitigation measures could not reduce the impacts to below of significance. Implementation of feasible mitigation measures would reduce potentially significant impacts to the following issue areas to less than significant: air quality, biological resources, cultural resources, geologic hazards and resources, paleontological resources, public health, soils, traffic and transportation, visual resources, waste management, and wildfire and fire prevention.

Potential impacts to the following issue areas were determined not to be significant after further evaluation: hazardous materials and resources, land use, noise, socioeconomics, water resources, and worker health and safety.

Sections 5.6 and 5.7 compare the impacts of the No Development-No Project Alternative, Buildout No Project Alternative, and the Reduced Project Alternative to the impacts of the Project. A qualitative summary of these alternatives that compares their potential impacts is provided in Table 5-1, Summary of Alternatives to the Project.

5.5 Alternatives Considered but Rejected

5.5.1 Project Alternatives

The purpose of an alternatives analysis is to develop alternatives to the Project that substantially lessen at least one of the potentially significant environmental effects identified as a result of the Project, while still feasibly meeting most of the Project objectives. The Project proponent went through an extensive site planning process to identify and avoid constraints, which included analysis of numerous potential sites for the Project (see Figure 5-1, Alternative Site Locations Map). This site planning process was intended to create a project that optimizes reliable, dispatchable energy generation, while being sensitive to environmental constraints, and ultimately resulted in the proposed Project. Several alternatives were considered but subsequently rejected from further analysis because they did not accomplish most of the Project objectives or would result in greater impacts than the Project. As discussed in more detail below, the alternatives considered and rejected include the following.

5.5.2 Distributed Storage Alternative

One potential alternative to this project would be the combination of many, smaller distributed storage projects across the local area. This would be done on the residential and commercial level, with individual homeowners and companies installing these systems. A typical home battery storage system installed in a garage holds 13.5 kilowatt-hours (kWh) of energy as compared to the up to 1,000,000 kWh that the Project would hold. This would mean that approximately 74,000 homes would need to install home storage systems to reach the level of energy storage the Project proposes. This would require financial outlay and the decision of thousands of homeowners or business owners, which is an infeasible option considering there could not be any type of coordinated commitment to complete these installations.

5.5.3 No Switchyard Alternative

Another project alternative would be to interconnect the project directly into either the existing Trabuco or Capistrano substations. This would remove the requirement for the new SDG&E switchyard, but in turn would require the expansion of either the Trabuco or Capistrano substations. These substations do not have ample room for these proposed expansions, and additional adjacent commercial or residential land would be required to be purchased or condemned to achieve this. Furthermore, the battery project would still need to be built and a new gen-tie transmission line would need to be constructed from the project to the substation which would be 1.5 - 2 miles long. This alternative would require additional land rights that could impede on private land, existing roads, the railroad, and would be in addition to the existing transmission lines in the area. Lastly, considering this would be a change from the executed interconnection agreement held with SDG&E and CAISO, and would require starting the process in the next interconnection application window in 2025, which would push the project timeline back by approximately 10 years. All of these factors make it infeasible to directly connect to the substation. In addition, it would be significantly more impactful than the existing proposal.

5.5.4 Alternative Locations

As noted previously, the purpose of an alternatives analysis is to develop alternatives to the Project that substantially lessen at least one of the potentially significant environmental effects identified as a result of the Project, while still feasibly meeting most of the Project objectives. The Project proponent went through an

extensive site planning process to identify and avoid constraints, which included analysis of numerous potential sites for the Project (see Figure 5-1, Alternative Site Locations Map). This site planning process was intended to create a project that optimizes reliable, dispatchable energy generation, while being sensitive to environmental constraints, and ultimately resulted in the proposed Project. Several alternative site locations were considered but subsequently rejected from further analysis because they did not accomplish most of the Project objectives or would result in greater impacts than the Project. As discussed in more detail below, the alternatives considered and rejected include several alternative site locations.

Description

The alternative site locations were evaluated to determine if a 250 MW, 1,000 MWh, battery energy storage system with supporting improvements could be placed in another location. To be a viable alternative, it was assumed that the alternative locations would consist of areas of flat land and of adequate size for construction of above ground facilities of at least 14 acres near the existing 138kV Trabuco-Capistrano transmission line.

Feasibility

The key question and first step in the analysis is whether any of the potentially significant effects of the Project would be avoided or substantially lessened by developing the Project in another location. Only locations that would feasibly attain most of the basic project objectives and avoid or substantially lessen any of the significant effects of the Project need to be considered for inclusion in the alternatives analysis. Further, several factors that may be taken into account when addressing feasibility of alternatives include site availability (would site control of the alternative site location be available through a long-term lease or purchase), and the need to provide additional supporting infrastructure at the alternative site location.

The Project site has been selected in accordance with Objectives 1, 2, 4, 5, 6, and 7 (see Section 5.2, above). The Project site meets these objectives by being large and flat enough to accommodate the energy storage project and the technology that will be used (Objectives 1 and 2), offering a suitable interconnection location along the 138kV Trabuco to Capistrano transmission line that could be developed within the requisite time period for delivery of energy storage and would provide benefits to the municipality and County (Alternatives 4, 5, and 6), and minimizing impacts to natural resources (Objective 7). The proposed Project's point of interconnection would be ideal because it is located midway between the two existing substations (see Figure 5-1), which substantially improves the reliability of the grid in the event of a line outage (only one part of the grid would be down while the other part could remain live).

The Project proponent explored multiple alternative site locations throughout the 138kV Trabuco to Capistrano transmission line corridor as depicted on Figure 5-1. Alternative site locations that could not feasibly interconnect to the 138kV Trabuco to Capistrano transmission line were not considered because changing the point of interconnection for the Project would trigger a new CAISO application process that would postpone the Project's development at least ten (10) years, if not longer. This is due to the next CAISO interconnection window being in 2025 at the earliest, with a 3-year process to obtain an interconnection agreement following that, and an approximately 5-year timeline to allow for engineering procurement, and construction of the interconnection facilities and network upgrades required. Such a substantial delay in project implementation is infeasible and would not meet any of the Project objectives.

Finding available real estate on which to site a utility-scale battery energy storage system that feasibly meets most of the basic project objectives while avoiding or substantially reducing at least one significant effect is a

significant hurdle within the corridor through which the 138kV Trabuco to Capistrano transmission line runs, which is highly urbanized. A utility-scale battery energy system requires an area that is relatively flat, provides sufficient area for the project components (approximately 14 acres), and is near the existing SDG&E transmission line with full deliverability as identified in the CAISO and SDG&E interconnection agreement dated May 18, 2022.

Seventeen alternative site locations are shown in Figure 5-1 along with the Project site. All seventeen alternative site locations were screened out for various reasons as discussed below:

- Alternative Sites Locations 1, 2, 3, 4 and 5 are located outside of the jurisdiction of the City of San Juan Capistrano in the city of Laguna Hills or the city of Laguna Niguel and are designated either Open Space, Community Commercial, Park or Estate Residential in their respective General Plans. Sites 1, 2 and 3 are located on steep slopes that are inconducive for development and are not in a suitable location to interconnect with the 138kV transmission line between the two substations. Site 4 does not provide adequate street access for the Project and is too small to accommodate the proposed development footprint. In addition, there is little potential to obtain site control of these areas as these sites are not currently for sale. Accordingly, Alternative Sites 1, 2, 3, 4 and 5 would not feasibly attain most of the Project objectives, and would not avoid or substantially lessen at least one of the Project's significant environmental impacts.
- Alternative Site Location 6 is located on land that is designated General Open Space in the City of San Juan Capistrano General Plan, and a change in land use designation and zoning would require multiple discretionary permit actions. Portions of the site are located on steep slopes that would not be conducive for construction. In addition, there is little potential to obtain site control of this location as the site is not currently for sale. Accordingly, Alternative Site 6 would not feasibly attain most of the Project objectives, and would not avoid or substantially lessen at least one of the Project's significant environmental impacts.
- Alternative Site Location 7 is located on land that is zoned Agri-Business District and is designated a Special Study area in the City of San Juan Capistrano General Plan. Special study areas have unique features, environmental conditions, and/or development constraints requiring special regulations or standards designed to address or preserve those conditions. This land use would be incompatible with the proposed Project facilities because such areas require preparation of a development plan including special regulations or standards addressing the relevant features, conditions and constraints of the special study area. This site would also potentially require upgrades or extension of the SDG&E Trabuco substation. There is also little potential to obtain site control of Location 7 as it is currently not for sale. Accordingly, Alternative Site Location 7 would not feasibly attain most of the Project objectives, and would not avoid or substantially lessen at least one of the Project's significant environmental impacts.
- Alternative Site Location 8 is located on land that is zoned Community Park District and designated as Community Park under the Northwest Open Space Specific Plan (No. 2020-01). The Community Park Land Use Designation allows uses such as sports fields, public facilities, nature study centers and tot lots as permitted uses, and a change in land use designation and zoning would require multiple discretionary permit actions. In addition, this land is on the eastern side of the railroad tracks and would require a railroad crossing that may not be feasible to construct, and would substantially complicate the Project if it were feasible to construct. In addition, there is little potential to obtain site control of this location as the site is currently not for sale. The site would also not meet project objectives that apply to site suitability (Objectives 1, 4, 5, 7). Accordingly, Alternative Site 8 would not feasibly attain most of the Project objectives, and would not avoid or substantially lessen at least one of the Project's significant environmental impacts.

- Alternative Site 9 is zoned and designated General Open Space and Open Space Recreation in the San Juan Capistrano General Plan, and a change in land use designation and zoning would require multiple discretionary permit actions. In addition, there is little potential to obtain site control of this location as the site is not currently for sale. In addition, this site has a plan of development that is incompatible with the Project. Further, this site is not in a suitable location to tap into a line between the two substations as it is too far to the south to aid the northern substation. and would not improve the reliability of the grid in the event of line outage as discussed above. Accordingly, Alternative 9 would not feasibly attain most of the Project objectives, and would not avoid or substantially lessen at least one of the Project's significant environmental impacts.
- Alternative Site Locations 10 and 11 are designated Quasi Industrial/Medium High Density and Neighborhood Park respectfully in the City of San Juan Capistrano General Plan. These sites are currently not for sale and do not provide the needed 14 acres necessary for the project components. In addition, these sites are not in a suitable location to tap into a line between the two substations because they are next to the existing Capistrano substation, which would require a new interconnection request setting the project back by 10 years and an expansion of the substation. Accordingly, Alternatives 10 and 11 would not feasibly attain most of the Project objectives, and would not avoid or substantially lessen at least one of the Project's significant environmental impacts.
- Alternative Site Locations 12, 13, 14 and 15 on the eastern side of Interstate 5 are located on steep slopes that would be inconducive to construct the proposed facility. In addition, these sites would also require new transmission lines across multiple land parcels and the I-5 to connect to the Trabuco-Capistrano transmission line. Finally, sites 12, 14 and 15 are primarily designated Very Low Density Residential uses and General Open Space in the city of San Juan Capistrano General Plan, which is an incompatible land use with the Project. A change in land use designation and zoning would require multiple discretionary permit actions. In addition, these sites would also be potentially more impactful because project components would need to be constructed above or below ground in order to across I-5. These sites are currently not for sale, allowing little potential for obtaining site access. Accordingly, Alternatives 12, 13, 14 and 15 would not feasibly attain most of the Project objectives, and would not avoid or substantially lessen at least one of the Project's significant environmental impacts.
- Alternative Site Location 16 is readily available as it is currently for sale and is undeveloped land in the City of San Juan Capistrano. This site is located to the east of Interstate 5, uphill from Rancho Viejo Road and features approximately 9.65 acres of land designated Public Institutional in the City of San Juan Capistrano General Plan and is zoned Planned Community District. However, the site has already gone through the permitting process and has an approved CDP plan of development that includes commercial uses that would not allow for the type of use proposed in the Project. In addition, this site is slightly smaller (9.65 acres) than what is required by the Project (14 acres), and is heavily sloped. Finally, this site would require the gen-tie transmission line to be longer because it would need to run either above or below Rancho Viejo Road, both the northbound and southbound lanes of the I-5 freeway (which are grade-separated), and Camino Capistrano to reach the 138kV Trabuco to Capistrano transmission line. This aspect would substantially complicate the project would be more environmentally harmful as it would likely cause additional potentially significant aesthetic, biological resource and air quality environmental impacts than the Project. Accordingly, Alternative Site Location 16 would not feasibly attain most of the Project objectives, and would not avoid or substantially lessen at least one of the Project's significant environmental impacts.
- Alternative Site Location 17 is the Prima Deshecha Landfill located approximately 4.5 miles to the southeast from the Project point of interconnection and would require a 4.5 mile-long gen-tie transmission line to be constructed through dozens of land parcels. This is not feasible from a land rights perspective

and due to the increased land footprint, this alternative would have a significantly larger environment impact than the proposed Project. Alternative Site Location 17 is not readily available for site control as it is currently not for sale and is developed as a working landfill site in the City of San Juan Capistrano. This site is also located to the east of I-5, and would require the gen-tie transmission line to be significantly longer. In addition, the gen-tie transmission line would need to run either above or below the northbound and southbound lanes of the I-5 freeway (which are grade-separated) to reach the 138kV Trabuco to Capistrano transmission line. This aspect would substantially complicate the project as it would be more environmentally harmful. Accordingly, Alternative 17 would not feasibly attain most of the Project objectives, and would not avoid or substantially lessen at least one of the Project's significant environmental impacts.

Ability to Meet Project Objectives and Avoid or Substantially Lessen Significant Effects

As shown in the analysis above, none of the seventeen alternative site locations have the potential to feasibly meet most of the basic Project objectives and avoid or substantially lessen any of the significant effects of the Project, as outlined above.

Conclusion

In conclusion, all seventeen alternate project site locations were dismissed from further evaluation based on one or more of the following reasons:

- Inadequate development area
- Slope considerations
- Low probability of gaining site control
- Environmental considerations
- Less desirable site conditions
- Longer transmission line length
- Location considerations along the Trabuco to Capistrano 138 kV transmission line

5.5.5 Alternative Technologies

The Project proponent went through an analysis to identify alternative technologies to the battery energy storage technology proposed for the Project (lithium iron phosphate (LFP) battery energy storage technology in non-habitable enclosures). This analysis was intended to create a project that optimizes reliable energy storage and generation at the point of interconnection along the 138kV Trabuco to Capistrano transmission line, while being sensitive to environmental constraints. Several alternative technologies were considered but were subsequently rejected from further analysis because they did not accomplish most of the Project objectives or would result in greater impacts than the Project. A discussion of the alternative technologies considered and rejected is provided below:

Fossil Fuel Power Plant (Coal, Natural Gas)

Fossil fuel plants burn fuel sources such as coal or natural gas to turn heat into mechanical energy by turning turbines and transporting the generated energy into the electrical grid. The fuel must be transported to the power plant through infrastructure such as subterranean gas lines, or trucked in. This thermal process releases

significant amounts of GHGs into the atmosphere which is inconsistent with the project objectives. Due to these issues, this alternative was rejected in favor of the battery storage technology.

Nuclear Power Plant

Another type of thermal power plant is a nuclear power plant. These projects create a heat source using a nuclear reactor which generates steam, in turn causing a generator to produce electricity. While this is a source of carbon free energy, there are numerous issues including risks associated with the production, storage, and potential release of radioactive waste from a human health perspective. The potential risks and impacts of this type of development are significant and therefore a nuclear generator is rejected as a viable alternative to the Project.

Traditional Compressed Air Energy Storage

Traditional compressed air energy storage uses a compressor to convert electrical energy into high pressure compressed air that is stored in this increased energy state, typically by injecting the compressed air into existing, deep salt caverns or depleted gas reservoirs that can store compressed air and retain it in the formation for long periods. When electricity is required, the compressed air is expanded through a turbine generator, converting the stored energy back into electricity. Because the expansion process results in significant cooling of the expanding air stream, heat is added back into the compressed air before to avoid unacceptably low temperatures for continuing operation of the turbine. The addition of heat to the expansion process generally requires the combustion of significant quantities of fossil fuel with associated emissions including criteria and toxic air contaminants as well as significant emissions of GHGs. Neither the Project site nor any of the Alternative Site Locations along the 138kV Trabuco to Capistrano transmission line contain site characteristics conducive to compressed air energy storage (i.e., salt caverns, depleted natural gas reservoirs, etc.). Further, this technology produces GHG emissions as a by-product of the heating process. Accordingly, the traditional compressed air technology would not feasibly meet most basic project objectives or avoid or substantially reduce a significant effect of the Project, and was rejected in favor of battery energy storage technology.

Pumped Hydro Storage

Pumped hydro storage uses water released by gravity from an upper reservoir through turbine generating equipment into a lower reservoir separated by at least several hundred to more than a thousand feet or more of elevation to generate electricity. Typically, power is generated during peak power demand periods or when needed to address system reliability. During off-peak periods, water from the lower reservoir is pumped back up into the upper reservoir to “recharge” the system. Pumped hydro storage has many positive characteristics including a long lifespan (50+ years), long storage durations, and the provision of synchronous generation (including rotational inertia) to the grid. Neither the Project site nor any of the Alternative Site Locations along the 138kV Trabuco to Capistrano transmission line contain site characteristics conducive to pumped hydro storage (i.e., lower and upper water reservoirs separated by hundreds to thousands of feet). Further, even if such site conditions existed, the creation of large reservoirs would require inundation of a much larger area than the proposed Project and would result in much greater land use, biological and visual resources impacts than the Project. In addition, the technology is also much more capital intensive per installed MW than the battery energy storage technology. Finally, pumped hydro would not feasibly meet most basic project objectives or avoid or substantially reduce a significant effect of the Project, and was rejected in favor of battery energy storage technology.

5.6 Analysis of the No Project Alternative

5.6.1 No Project Alternative Description and Setting

The No Project Alternative is required so that the CEC can compare the impacts of approving the Project with the impacts of not approving the Project. The No Project Alternative must discuss the existing conditions as well as what would be reasonably expected to occur in the foreseeable future if the Project was not approved, based on current plans and consistent with available infrastructure and community services. The No Project Alternative is the circumstance under which the Project does not proceed, the project site remains in its existing condition, and all impacts associated with the Project would be avoided.

The existing City of San Juan Capistrano General Plan land use designation for the Project development footprint is Planned Community; therefore, it is reasonable to assume that if the Project was not approved that the site would be developed as Planned Community uses. For purposes of this No Project Alternative analysis, the uses identified in the Crystal Cathedral Ministries Planned Community (see Table LU-3 of the San Juan Capistrano General Plan) were considered as to what could potentially be developed within the project site. The Crystal Cathedral Ministries Planned Community called for 80% of the site to be developed as Public Institutional uses (including a retreat center) and 20% of the project site to be developed as an Assisted Care Facility that could include a wellness center. The Public Institutional designation provides for schools, churches, fire stations, community centers, utility substations and office complexes. The maximum intensity of development is a floor area ratio is not allowed under the Crystal Cathedral Ministries Planned Community, so this analysis considered the average intensity of development of floor area ration of 0.25:1. The Assisted Care Facilities designation provides for limited special public/institutional facilities that provide specialized care for seniors and persons requiring special medical housing, nursing homes, and other specialized housing of a similar nature. The maximum intensity of development is a floor area ratio of 0.40:1. Thus, the conceptual land use plan for this analysis would include these uses.

Thus, for purposes of the No Project Alternative two scenarios are analyzed below. Under the No Development-No Project Alternative, no development would occur on the project site and the site would remain in its existing condition. Under the Buildout No Project Alternative it is anticipated that the Project site would be developed as currently zoned and consistent with the General Plan, into a multi-use concept, including a retreat center and an assisted living center with residential units, ancillary facilities, and supporting infrastructure. The size and number of residential units of this development are conceptual, but assuming the 40.8-acre site is developed with required standard floor area ratios for a 14-acre development, this could result in about 120,000 square feet of development for Public Institutional improvements, and 50,000 square feet of care facilities, which could result in over 50 residential units.

5.6.2 Comparison of the Effects of the No Project Alternative to the Project – No Development-No Project Alternative

Air Quality

Under the No Development-No Project Alternative, no additional air quality emissions would occur, and the Project's impacts related to construction emissions of criteria pollutants would be avoided. Specifically, any construction emissions from nitrogen oxide (NO_x) from the Project that would potentially exceed the emissions threshold of

significance would be avoided. While the Project would provide energy storage that offsets emissions from other sources and would have emissions during construction that are below a level of significance, the No Development-No Project Alternative would entirely avoid these potential air quality emission impacts of the Project.

Biological Resources

The existing site conditions would remain under the No Development-No Project Alternative, including existing biological resources. Therefore, no impacts to biological resources would occur under this alternative. When compared to the Project, the No Development-No Project Alternative would avoid all impacts to biological resources. This includes avoidance of impacts to sensitive wildlife species like the red diamond rattlesnake, pallid bat, and California horned lark This also includes avoidance of impacts to nesting birds and raptors. The Project would mitigate any potential impacts to biological resources to below a level of significance with mitigation measures and best management practices (BMPs) such as preconstruction surveys to special status species and nesting bird and wetland surveys and avoidance. While these impacts would likely be reduced to below a level of significance by mitigation under the Project, the No Development-No Project Alternative would completely avoid impacts to biological resources since no change to the resources would occur. In summary, if no development were to occur under the No Project-No Development Alternative, then all biological resource impacts identified for the Project would be avoided.

Cultural Resources

Under the No Development-No Project Alternative, no changes to the existing conditions would occur and the cultural and tribal cultural resources on the project site would not be disturbed. When compared to the Project, the No Development-No Project Alternative would avoid all impacts to cultural resources. This includes avoidance related to any undiscovered cultural or tribal cultural resources within the potential impact area, and potential impacts to undiscovered human remains during construction or decommissioning. The Project would mitigate these impacts to below a level of significance by requiring mitigation measures such as archeological and tribal monitoring during grading activities. While these impacts would ultimately be reduced to below a level of significance by proposed mitigation under the Project, the No Development-No Project Alternative would completely avoid impacts to cultural resources since no change to the resources would occur.

Geology, Soils, and Seismicity

The No Development-No Project Alternative would not involve any construction or structures. Thus, the No Development-No Project Alternative would avoid the Project's potentially significant cumulative geologic impacts related to issues such as grading and earthwork during construction and decommissioning. The Project has potential impacts associated with geotechnical hazards. While this cumulative impact would be reduced to below a level of significance with implementation of a mitigation measure requiring adherence to the recommendations in the project's geotechnical report that demonstrates compliance with the California Building Code requirements, the No Development-No Project Alternative would entirely avoid this cumulative impact considering no improvements would occur in these areas. Thus, all geologic impacts identified for the Project would be avoided under the No Development-No Project Alternative.

The No Development - No Project Alternative would not involve the construction, operation or decommissioning of any facilities and the Project site would remain in its existing condition. Thus, the No Development-No Project Alternative would avoid any impacts associated with the permanent loss of availability of known mineral resources that are minable, processable and marketable.

Hazardous Materials and Resources

The No Development-No Project Alternative would not involve the construction, operation or decommissioning of any facilities. Thus, the No Development-No Project Alternative would avoid the Project's less than significant impacts related to the transport, use and disposal of hazardous materials during construction, operation, and decommissioning of facilities. While the Project's potential hazardous materials impacts would be less than significant the No Development-No Project Alternative would entirely avoid these impacts considering no facilities would be constructed, operated or decommissioned on the project site. Thus, all hazardous materials impacts identified for the Project would be avoided under the No Development-No Project Alternative.

Land Use and Planning

The Project is anticipated to have less than significant impacts related to land use and planning because it will not divide an established community and will comply and/or be consistent with all applicable land use and planning documents; however, the No Development-No Project Alternative would not involve the construction, operation or decommissioning of any facilities on the Project site and existing conditions would remain. Thus, this alternative would avoid any land use and planning impacts associated with the Project.

In addition, while historical resources indicated that the Project site was used for agricultural purposes from 1938 to 2012. pursuant to the Department of Conservation maps, the Project site is designated Urban and Built-Up land, and it is currently not reserved for important agricultural uses. Therefore, the Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use. There are also no Williamson Act contracts on the Project site and no forestry resources. Thus, no agricultural or forestry impacts would occur under the Project or the No Development–No Project Alternative.

Noise

No noise would be generated by the No Development-No Project Alterative, as the site would remain in its existing condition, and no construction or operations would occur. As a result, the No Development-No Project Alternative would avoid all impacts related to noise associated with the Project. This includes avoidance of the construction-related noise, operational noise and decommissioning-related noise. While these noise impacts would be less than significant by the Project, all potential noise impacts would be avoided under the No Development-No Project Alternative.

Paleontological Resources

Under the No Development-No Project Alternative, the paleontological resources on the Project site would also not be disturbed. Therefore, no impacts to paleontological resources would occur under the No Development-No Project Alternative. While the Project would ultimately reduce any paleontological resource impacts to below a level of significance with the implementation of mitigation measures such as the development and implementation of a paleontological monitoring and mitigation plan and a preparation of a final paleontological resources report, the No Development-No Project Alternative would completely avoid all paleontological resource impacts identified for the Project.

Public Health

Under the No Development-No Project Alternative, no public health impacts would occur, and the Project's less than significant impacts related to Project construction health risks would be avoided. While the Project have less than significant individual cancer risk or chronic hazards for residents and workers during construction, the No Development-No Project Alternative would entirely avoid the public health impacts of the Project.

Socioeconomics

Under the No Development-No Project Alternative, none of the battery energy storage facilities proposed under the Project would be constructed, operated or decommissioned. As discussed in Section 4.10, Socioeconomics, the facilities proposed under the Project would not induce population growth in the area, displace or require new housing, necessitate additional school services or make adverse demands on local water, sanitary sewer, electricity, or natural gas during construction or operation. While the proposed Project's construction and operation may produce temporary impacts on police, fire or hazardous materials handling, these impacts would not require increases in the level of public service offered or affect the agency response times. Therefore, while these potential impacts would be avoided completely under the No Development-No Project Alternative; this alternative would also not generate the positive indirect and induced economic impacts that the proposed Project's construction and operation would produce from new tax revenues. Therefore, the substantial beneficial impacts associated with economic, employment, and public services would not occur under the No Development-No Project Alternative.

Soils

Under the No Development-No Project Alternative, none of the battery energy storage facilities proposed under the Project would be constructed, operated or decommissioned, and no potential impacts associated with soil erosion during construction or other significant soil properties would occur. While these impacts would be reduced to below a level of significance with implementation of a mitigation measure requiring adherence to the recommendations in the project's geotechnical report, the No Development-No Project Alternative would entirely avoid these impacts considering no improvements would occur in these areas. Thus, all soil impacts identified for the Project would be avoided under the No Development-No Project Alternative.

Traffic and Transportation

Under the No Development-No Project Alternative, none of the battery energy storage facilities proposed under the Project would be constructed, operated or decommissioned and no additional daily vehicle trips would be generated that would cause the amount of vehicle miles traveled (VMT) to increase beyond existing conditions. No potential impacts associated with truck turns would occur. While this impact would be reduced to below a level of significance with implementation of a mitigation measure requiring a traffic control plan, the No Development-No Project Alternative would entirely avoid this impact considering no new road improvements would occur on the site. Thus, any potential impacts associated with traffic and transportation would be avoided completely under the No Development-No Project Alternative.

Visual Resources

Under the No Development-No Project Alternative, the visual conditions of the Project site would be retained in their current state. As discussed in Section 4.13, Visual Resources, the proposed Project would not eliminate or

obstruct a public view of a scenic vista or a scenic resources. The Project has also been designed with a 10-foot-tall decorative perimeter wall, a 20-ffot landscape buffer around the perimeter for screening and aesthetic enhancement, and vine-covered trellises; thus, public views of the storage enclosures would be blocked from viewers. While Project does conform with regulations governing scenic quality, lighting during operations would create a new source of light that would be minor contributor to light levels at night. The No Development-No Project Alternative would avoid the Project's nighttime lighting impacts altogether.

Waste Management

The No Development-No Project Alternative would result in no changes to the existing conditions. Therefore, all potential impacts associated with nonhazardous waste and hazardous waste disposal during construction and operation would occur. under this alternative. While these impacts would be reduced to below a level of significance with implementation of mitigation measures such as BMPs to reduce waste production, BMPs for handling hazardous waste or wastewater, collection and processing of nonhazardous waste for material recycling, and the proper recordation, labeling, storage and packaging of hazardous materials, the No Development-No Project Alternative would entirely avoid these impacts considering no new nonhazardous or hazardous waste would be produced on the site. Thus, any potential impacts associated with waste management would be avoided completely under the No Development-No Project Alternative.

Water Resources

The No Development-No Project Alternative would not involve the construction, operation or decommissioning of any facilities. Thus, the No Development-No Project Alternative would avoid the Project's potential significant water resources impacts associated with water quality, flooding potential, water supply, and stormwater runoff and drainage during construction, operation and decommissioning of the Project. While the Project's water resources impacts would be reduced to below a level of significance with the compliance with existing laws and regulations such as the preparation and implementation of a stormwater pollution prevention plan and stormwater management plan that specify construction and operational best management practices, the No Development-No Project Alternative would entirely avoid these potential impacts considering no facilities would be constructed, operated or decommissioned on the Project site. Thus, all water resources impacts identified for the Project would be avoided under the No Development-No Project Alternative.

Wildfire

Existing conditions would remain under the No Development No Project Alternative, thus this alternative would not have any construction or operational activities that would increase wildfire risks. While, the Project site itself is not located within a State Responsibility Area (SRA) or Local Responsibility Area (LRA) Very High Fire Hazard Severity Zone (VHFHSZ), as detailed in Section 4.17, Wildfire. areas within ½-mile to one-mile from the Project site are within SRA/VHFHSZ and Tier 2 or Tier 3 High Fire Threat Districts. The No Development No Project Alternative would avoid the Project's potential wildfire impacts related to operational-related wildfire hazard risk and construction-related wildfire risk and the installation or maintenance of associated infrastructure that may exacerbate fire risk during construction and operation. While these impacts would be reduced to below a level of significance with the implementation of mitigation measures, the No Development-No Project Alternative would entirely avoid these impacts.

Worker Health and Safety

Existing conditions would remain under the No Development-No Project Alternative. Thus, this alternative would not have worker health or safety impacts associated with any construction, operational or decommissioning activities on the site. The No Development-No Project Alternative would avoid the Project's potentially significant health and safety impacts related to construction-related risks and operational-related risks. While these impacts would be reduced to below a level of significance with the implementation of construction health and safety programs and plans such as injury and illness prevention programs, fire protection and prevention programs, personal protection programs, first aid programs, emergency action programs, and construction safety programs during the construction phase and operations health and safety programs such as injury and illness prevention programs, first aid programs, fire protection and prevention programs, emergency action programs, personal protection programs, and operational safety programs during the operational phase, the No Development-No Project Alternative would entirely avoid these impacts.

5.6.3 Summary of the No Project Alternative - No Development-No Project Alternative

Under the No Development-No Project Alternative, the Project would not be implemented, and the site would remain in its current condition. Under this alternative, none of the direct or indirect environmental impacts associated with construction, operation and decommissioning of the Project would occur.

If the Project was not constructed, the basic project objectives would not be met, and the grid reliability, and environmental and policy benefits from the Project would not be realized. The Project would provide a significant contribution to the State's ambitious renewable energy and storage needs and the No Development-No Project Alternative would deprive the State and the area of this significant contribution. The No Development-No Project Alternative would also not be consistent with California's environmental policy goals of encouraging development and deployment of energy storage resources, such as the Project, as articulated in CPUC Decision 21-06-035.

The No Development-No Project Alternative could result in inadequate system reliability (more blackouts), greater fuel consumption, greenhouse gas emissions, air pollution, climate change and other environmental impacts in the state because less efficient energy storage such as the Project would be available. The No Development-No Project Alternative would also deprive the area of a significant construction employment opportunity with associated purchases of local goods and services, as well as jobs associated with the operation and maintenance of the facility, and ongoing property tax revenue, and other community benefits. Therefore, because no development would not satisfactorily meet the project objectives specified above, the No Build-No Project Alternative was rejected in favor of the Project.

5.6.4 Comparison of the Effects of the No Project Alternative to the Project – Buildout No Project Alternative

Air Quality

The Buildout No Project Alternative would generate construction and operational emissions associated with a multi-use development, which would include up to 50 assisted living residential units. Construction on the land for a retreat center, assisted living residences, and ancillary facilities would entail additional grading, building construction, architectural coatings, infrastructure improvements, and paving than the Project. In addition, the

construction period would be longer than the Project construction schedule considering the additional grading and construction efforts required. Overall, the daily construction-related emissions would be expected to increase under the Buildout No Project Alternative due to the more extensive construction activities required. Thus, the Buildout No Project Alternative would result in greater impacts than the Project related to construction emissions of criteria pollutants.

In addition to construction-related air quality emissions, the Buildout No Project Alterative would result in increased air quality emissions during operations compared to the Project. A multi-use development would generate emissions from transportation (mobile sources), energy use, water use, and solid waste generation. Due to the size of the development proposed, operational air quality impacts of the Buildout No Project Alternative would be potentially significant. Conversely, the Project would provide a source of clean battery energy storage system uses that would reduce energy-related emissions during operations and would require minimal transportation for operation. As such, the Project air quality operational impacts would be significantly less than the Buildout No Project Alternative, as the operations would not generate substantial traffic, energy, water, or solid waste.

Biological Resources

Under the Buildout No Project Alternative, it is anticipated that approximately 14 acres of the Project site would be developed. Therefore, the buildout scenario would include the same footprint as the Project. In addition, the Buildout No Project Alternative would introduce more people and more development to the area that would potentially result in greater potential for indirect impacts to biological resources from human and pet intrusion into open space, lighting, water quality, invasive plants, and other impacts. Thus, impacts related to biological resources would be expected to be increased relative to the Project. Similar to the Project, it is expected that mitigation measures would be feasible to implement to reduce these potential biological resource impacts to below a level of significance.

Cultural Resources

Under the Buildout No Project Alternative, it is anticipated that approximately 14 acres of the project site would be developed. This would be the same ground disturbance as the Project. Thus, impacts related to the cultural resources and tribal cultural resources would be expected to be the same relative to the Project including potential impacts to undiscovered cultural and tribal cultural resources within the potential impact area and potential impacts to undiscovered human remains during construction. Similar to the Project, it is expected that mitigation measures would be feasible to implement to reduce these potential cultural resource impacts to below a level of significance.

Geologic Hazards and Resources

Under the Buildout No Project Alternative, it is anticipated that approximately 14 acres of the project site would be developed. This would result in the same site disturbance as the Project site. In addition, the buildout includes up to 50 residential units and other structures, while the Project would be an unstaffed operation (except for routine O&M). Thus, the Buildout No Project Alternative impacts related to underlying geologic conditions would be the same as the Project. Similar to the Project, it is expected that mitigation in the form of a project-specific geotechnical report recommendations would be feasible to implement to reduce these potential cumulative geologic impacts to below a level of significance.

Under the Buildout No Project Alternative, it is anticipated that approximately 14 acres of the Project site would be developed, which is the same as the development footprint of the Project (14 acres). The buildout scenario would include a multi-use development that would include permanent development such as 50 assisted living residential units and a retreat center. However, since there are no known mineral resources in the area; therefore, impacts associated with the permanent loss of a known mineral resources under the Buildout No Project Alternative are anticipated to be the same as that caused by the Project. No impacts are anticipated to occur to minerals and geologic forms from either the proposed Project or this alternative.

Hazardous Materials and Resources

Similar to the Project, the Buildout No Project Alternative would include adherence to all regulations pertaining to hazards and hazardous materials. All hazardous materials would also be handled in accordance with regulations during construction and operations. Under the Buildout No Project Alternative, it is anticipated that approximately 14 acres of the Project site would be developed, which is the same as the development footprint of the Project. In addition, the Buildout No Project Alternative includes up to 50 assisted living residential units and other facilities, while the Project would be an unstaffed operation (except for routine O&M). With this amount of assisted living residential development, the buildout scenario is anticipated to generate 50 residents, which would increase the residents in the area from zero to 50 residents. This increase in the number or residents and would lead to a greater potential risk to impact lives and property by increasing the amount of hazardous materials use on site. Thus, impacts related to hazardous materials use would be potentially greater under this alternative. Even with the implementation of BMPs, training, and work and safety plans, the Buildout No Project Alternative creates a greater risk associated with hazardous materials and fire hazards could result in loss, injury or death on the property because there would be more people occupying the site. Thus, the potential impacts related to potential hazardous materials use during construction and operation would be increased by the Buildout No Project Alternative.

Land Use and Planning

The Buildout No Project Alternative assumes compliance with the applicable land use and planning documents. Thus, the Buildout No Project Alternative would have a less than significant impact related to land use and planning, similar to the Project.

As discussed above, historical resources indicate that the site was previously used for agriculture from approximately 1938 to 2012. However, the Department of Conservation maps show the Project site as Urban and Built-Up land, and the Project site does not include important agricultural uses, Therefore, similar to the Project, the Buildout No Project Alternative would have no impacts to agricultural land uses.

Noise

Under the Buildout No Project Alternative, it is anticipated that approximately 14 acres would be developed, which is the same as the Project development footprint (14 acres). Therefore, construction would involve similar grading and construction activities as the proposed Project. It is anticipated that construction activities would be located adjacent to existing residential properties, as well as future assisted living residential uses associated with the buildout scenario. Thus, it is expected that the construction noise impacts of the Buildout No Project Alternative would be potentially greater than the construction noise impact of the Project. It is expected that construction noise mitigation could be implemented to reduce this impact to below a level of significance.

In addition, the buildout scenario would result in noise-sensitive residential land uses on the Project site, as well as potentially noise-generating uses such as the retreat center and ancillary facilities that would require heating, ventilation, air condition (HVAC) equipment in proximity to noise-sensitive uses. Thus, this alternative has the potential to result in stationary noise that would exceed the City's noise limits identified in the City Noise Ordinance. Relative to the Project, the Buildout No Project Alternative could result in more of a potential exceedance of the County Noise Ordinance during operations than the Project. The Buildout No Project Alternative is expected to require noise mitigation measures such as noise barriers. This mitigation could be implemented to reduce these potential operational noise impacts to below a level of significance.

Development under the buildout scenario would also add a significant amount of traffic to local roadways where traffic levels are currently relatively low. All other factors being equal, it requires more traffic volumes to cause a 3 dB increase. Interstate 5 would have an increased volume of average weekday traffic (AWT) added to it. Local roadways provide access from the Project site to the I-5 as well as to other local communities such as San Juan Capistrano. Under the buildout scenario, up to 50 residential units are anticipated. With the addition of approximately 50 residents and a retreat center, the buildout scenario would generate a minimum of 200 average daily trips. The build out scenario is also anticipated to generate 50 residents, which would increase the residents in the area from zero to 50 residents. As such, it is expected that the Buildout No Project Alternative would increase traffic on these local roadways. Considering residential and other noise sensitive land uses are located adjacent to these roadways, it is expected that the Buildout No Project Alternative would result in significant mobile source noise impacts. This impact could be significant and unavoidable if mitigation is not feasible to be implemented. Thus, the mobile source impacts of the Buildout No Project Alternative would be greater than the Project.

Paleontological Resources

Under the Buildout No Project Alternative, it is anticipated that approximately 14 acres of the project site would be developed. This would result in similar site disturbance and grading as the proposed Project. Thus, impacts related to potentially significant paleontological resources would be the same under the Buildout No Project Alternative. Similar to the Project, it is expected that mitigation would be feasible to implement to reduce these potential paleontological resource impacts to below a level of significance.

Public Health

The Buildout No Project Alternative would generate construction and operational public health impacts associated with a multi-use development, which would include up to 50 assisted living residential units. Construction on the land for a retreat center, assisted living residences, and ancillary facilities would entail additional grading, building construction, architectural coatings, infrastructure improvements, and paving than the Project. In addition, the construction period would be longer than the Project construction schedule considering the additional grading and construction efforts required. Overall, the daily construction-related would be expected to increase under the Buildout No Project Alternative due to the more extensive construction activities required. Thus, the Buildout No Project Alternative would result in greater impacts than the Project related to both construction and operational-related health risk.

Socioeconomics

No occupied housing currently exists on the Project site that would be displaced by the Buildout No Project Alternative. This alternative includes up to 50 assisted living residential units and other facilities, while the Project

would be an unstaffed operation (except for routine O&M). With this amount of assisted living residential development, the buildout scenario is anticipated to generate 50 residents, which would increase the residents in the area from zero to 50 residents. This increase in the number or residents and growth for the area as it was anticipated in the San Juan Capistrano General Plan as a Planned Community; however, the Buildout No Project Alternative could result in more impacts related to population and housing and socioeconomic impacts than the Project. For instance, adverse demands on local water, sanitary sewer, electricity or natural gas may occur during the construction and operation of the Buildout-No Project Alternative. In addition, additional impacts on police, fire or hazardous materials handling may be required that would increase the level of public service offered or may affect the agency response times.

Soils

Under the Buildout No Project Alternative, it is anticipated that approximately 14 acres of the Project site would be developed. This would result in the same site disturbance as the proposed Project. In addition, the buildout would include up to 50 residential units and other structures, while the Project would be an unstaffed operation (except for routine O&M). Thus, the Buildout No Project Alternative impacts related to underlying soil conditions would be potentially greater than the Project due to the greater potential risk to impact lives and property. Thus, the direct and cumulative impacts related to potential grading and earthwork during construction and decommissioning would be increased by the Buildout No Project Alternative. Similar to the Project, it is expected that mitigation would be feasible to implement to reduce these potential impacts to below a level of significance.

Traffic and Transportation

The Buildout No Project Alternative would generate substantially more VMT during operations as compared to the Project (approximately 200 daily trips). Under the buildout scenario, up to 50 residences would be constructed whereas the Project would be remotely operated. VMT tends to increase as land use density increases and travel becomes more reliant on the use of the automobile due to the distances between origins and destinations. Transportation impacts under the Buildout No Project Alternative would be substantially greater than that of the proposed Project during the construction and operational phases. Similar to the Project, it is expected that the implementation of a traffic control plan during construction would be feasible to help reduce these potential impacts to below a level of significance.

Visual Resources

It is reasonable to expect the Project site would be developed as discussed in Section 5.6.1 above as a planned community. Thus, the following analysis is provided to disclose the potential aesthetic impacts of the Buildout No Project Alternative. Under the Buildout No Project Alternative, the visual conditions of the project site would be changed to a developed multi-use community with a retreat center and up to 50 assisted living residential units, ancillary facilities and infrastructure improvements. Regarding the size, scale and massing, the Buildout No Project Alternative is assumed to include one to two-story buildings that would be similar in height to existing structures in the area, but the assisted living use may be at a larger size, scale and massing than currently present. It is assumed that the proposed structures would be primarily neutral colors and colors that would not significantly contrast with development in the vicinity. The assisted living and retreat center structures would also be expected to be uniform in appearance.

The Buildout No Project Alternative would appear substantially denser than the existing condition and in overall scale given the number of assisted living units expected and total area that could be developed. The existing site

is 14 acres of disturbed and undeveloped private land, and considering some open space would be included in the Buildout No Project Alternative, the developed site is anticipated to be increased by 50 assisted living residential units and a retreat center; therefore, the increase in community size as well as the increase in density and suburban character would significantly alter the existing undeveloped character of the project site. Overall, the Buildout No Project Alternative would result in a contrast to the existing visual character and quality of the project site due to the change of the site from an open undeveloped site to a developed multi-use site.

Relative to the Project, the visual contrast would be more under the Buildout No Project Alternative considering the change to an expanded, more intense use would be less consistent with the existing area versus a change to a battery energy storage facility that has been designed with features to help screen the project from view, such as a 10-foot-tall decorative perimeter wall and a landscape buffer around the perimeter of the site. In addition, the proposed Project would be aesthetically enhanced with features such as vine-covered trellises, while the Buildout No Project Alterative would result in a significant visual contrast with the existing visual character and quality of the area be significantly altered with a multi-use site.

The Buildout No Project Alternative would change approximately 14 acres from undeveloped land to a developed multi-use site. The Buildout No Project Alternative would increase the developed community by increasing the number of assisted living residential units in the area. The buildout would also include a multi-use development with varying buildings, a driveway network, and parking areas instead of neutrally colored battery energy storage system enclosures and facilities behind a perimeter fence surrounded with landscaping. As described above, this change in character would significantly alter the existing visual character of the project site relative to the Project's impact. Given its aesthetic design that will block most storage enclosures from view, the battery energy storage facility character would be more compatible with the existing visual setting than a multi-use use development and would be in greater conformance with the regulations governing scenic quality. Thus, the Buildout No Project Alternative would result in greater impacts to visual resources than the Project.

Waste Management

The Buildout No Project Alternative would generate a significant demand for nonhazardous and hazardous waste management service considering it would include 50 assisted living residential units, a retreat center and other ancillary facilities. The existing waste management infrastructure may require improvements in order to provide adequate public services to the Buildout No Project Alternative. The Buildout No Project Alternative would also be required to ensure adequate waste management services would be provided for the proposed development. While impacts would be reduced with implementation of mitigation measures similar to the proposed Project, the Buildout No Project Alternative would likely produce waste management impacts greater than the Project.

Water Resources

The Buildout No Project Alternative would be required to comply with all applicable hydrology and water quality regulations. The Buildout No Project Alternative would be required to prepare a SWPPP in accordance with Regional Water Quality Control Board requirements and a National Pollutant Discharge Elimination System (NPDES) permit. Operational water quality management plans would also be required, as applicable. However, under the Buildout No Project Alternative, the development of up to 50 assisted living residences would result additional water demand. Water service in this area relies upon the Moulton Niguel Water Services District. The Project site is within the San Juan Valley Groundwater Basin (Basin) of the South Hydrologic Region. Currently water resources are not used on the site as it is vacant. The total estimated water resources for the lifetime of the Project is expected to be 35 acre-feet during construction and non-existent during operation, as the project

would be operated remotely and would not have any permanent on-site staff, which would be much less impactful when compared to the water demand required for the Buildout No Project Alternative. The Project's impacts to water would be less than significant as water would only be used for landscaping irrigation and to supply onsite fire hydrants. Therefore, the Buildout No Project Alternative's impacts to water are anticipated to be greater than the Project. In addition, the Project would not require wastewater treatment, potable water, or operational solid water services, and the impacts were determined to be less than significant. The Buildout No Project Alternative would have greater potential impacts on water resources compared to the Project, and the Buildout No Project Alternative could result in a water demand that would be potentially significant under the buildout scenario, while the Project's impacts to water are anticipated to be less than significant.

In addition, under the Buildout No Project Alternative, it is anticipated that approximately 14 acres of the Project site would be developed with a multi-use development that would include occupied structures. This alternative would result in a similar amount of impervious surfaces needed for the Project. Therefore, the amount of surface runoff on the site would be similar. It is anticipated that this alternative may require permit conditions to ensure impacts are less than significant, similar to the proposed Project. In addition, the Buildout No Project Alternative includes up to 50 assisted living residential units and other facilities, while the Project would be unmanned operation (except for routine O&M). Under the buildout scenario, this alternative is anticipated to generate 50 residents, which would increase the residents in the area from zero to 50 residents. This increase in residents would increase potential sources for pollution to surface runoff and would potentially cause new impacts to water quality in the area. Thus, the impacts related to potential drainage patterns and flood flows and other water quality impacts would be increased by the Buildout No Project Alternative.

The Buildout No Project Alternative would generate increased demand for utilities and service systems, including wastewater treatment, water, and stormwater. With the development of 50 assisted living residences and other facilities; this alternative would result in an increase in water demand.

Wildfire

Under the Buildout No Project Alternative, approximately 14 acres would be developed for a multi-use development. In regard to operations, the buildout scenario would add up to 50 assisted living residential units and approximately 50 residents. This increase in the number of residents and residential units would result in a greater potential risk to impact lives and property. Thus, the impacts related to potential operational and construction-related fire risk would be increased under the Buildout No Project Alternative. In addition, due to the increased amount of infrastructure that would be required for the construction and operation under the buildout scenario, the fire risk during construction and operation would be exacerbated under this alternative. Similar to the Proposed Project, the Buildout No Project Alternative would implement similar mitigation measures, similar to the Proposed Project. Also, the Buildout No Development Alternative would result in residential development within an area at risk from wildfires and would result in the increase of exposure of people to air quality/pollutants from wildfires. As such, wildfire impacts of the Buildout-No Project Alternative would be greater than the impacts of the proposed Project.

Worker Health and Safety

Under the Buildout No Project Alternative, approximately 14 acres would be developed for a multi-use development. In regard to operations, the buildout scenario would add up to 50 assisted living residences and approximately 50 residents. This increase in the number of residents and residential units would result in a greater potential risk to impact lives and property. Thus, the impacts related to potential operational and fire risk

would be increased under the Buildout No Project Alternative. In addition, due to the increased amount of infrastructure that would be required for the construction and operation under the buildout scenario, the fire risk during construction and operation would be exacerbated under this alternative. Similar to the Project, the Buildout No Project Alternative would implement the fire hazard mitigation measures during construction and operation. Also, similar to the Project, the Buildout No Project Alternative would have other safety programs during the construction and operations plan; however, this alternative would have that higher potential to risk lives and property on site. As such, worker health and safety impacts of the Buildout No Project Alternative would be greater than the impacts of the Project.

5.6.5 Summary of the No Project Alternatives - Buildout No Project Alternative

Under the Buildout No Project Alternative, the Project site would be developed as currently designated in the City of San Juan Capistrano's General Plan as Planned Community and Assisted Living. Under these land use designations, it is assumed that the site would be developed that is consistent with the General Plan and would develop a retreat center, an assisted living facility with 50 residential units, ancillary facilities and associated infrastructure.

The Buildout No Project Alternative would also result in the Project not being constructed and the basic Project objectives not being met. This alternative would also mean that the grid reliability and environmental and policy benefits, as discussed above and would not be realized and the State's renewable energy and storage needs for additional energy storage resources would persist.

The Buildout No Project Alternative would produce greater environmental impacts than the Project such as air quality, biological resources, hazardous materials and resources, noise, public health, socioeconomics, soils, transportation, visual resources, waste management, water resources, and wildfire. Therefore, the Buildout No Project Alternative would not satisfactorily meet the Project objectives specified above and would produce potentially greater impacts to the environment this alternative was rejected in favor of the Project.

5.7 Analysis of the Reduced Project Alternative

5.7.1 Reduced Project Description and Setting

The Reduced Project Alternative would have a reduced impact area relative to the Project. The intent of the Reduced Project Alternative is to reduce potential impacts when compared to the proposed Project. This alternative would also lessen impacts as discussed below.

Under the Reduced Project Alternative, the battery energy storage system would be reduced by 50% to 500 MW hours. This would result in a development footprint total of 10.5 acres, which is a reduction of 3.5 acres or approximately 25% compared to the Project. The decreased 25% of the battery energy storage system's development footprint would reduce the number of enclosures that could be installed by approximately 50% and would result in a corresponding reduction in the Reduced Project Alternative's battery energy storage capacity. The reduction in enclosures would reduce the MWh capacity of storage provided by the alternative. The Reduced Project Alternative would store approximately 500 MW hours compared to the Project's storage of 1,000 MW hours, which is a reduction of 500 MW hours. It is important to note the other Project components including the size of the SDG&E switchyard would be the same as the Project. It is only the battery yard that could be reduced

in this scenario because the switchyard would still need to accommodate a 250-megawatt 138 kV interconnection. The length of construction would be reduced under this Alternative from 18 months to 15 months, but the daily construction would remain the same as the Project.

5.7.2 Comparison of the Effects of Reduced Project Alternative to the Project

Air Quality

The Reduced Project Alternative would require less construction activities than the Project, which would reduce air quality emissions during construction. The reduction of the development footprint by about 3.5 acres (25%) under the Reduced Project Alternative would reduce diesel emissions, as the construction efforts would be reduced and would reduce any construction related emissions from NO_x relative to the Project. While the reduction in the development footprint would reduce overall emissions, the criteria pollutant emission thresholds are based on a daily emission rate. The duration of construction would be slightly reduced under this Reduced Project Alternative relative to the Proposed Project (15 months vs. 18 months), but the per day activities are expected to be similar to the Project. Thus, it is expected that the Reduced Project Alternative's impacts related to daily criteria pollutant emissions would be similar to the Project. The Reduced Project Alterative could implement mitigation measures to reduce potential air quality impacts to less than significant, similar to the Project.

Biological Resources

The Reduced Project Alternative would include a reduction in impact area of 3.5 acres when compared to the Project. Therefore, total mitigation requirements under the Reduced Project Alternative would be reduced under this alternative. Considering the reduction in the development footprint would lessen direct and indirect impacts to special status wildlife, during construction., As such, the Reduced Project Alternative would reduce biological resource impacts relative to the Project. The Reduced Project Alternative could implement mitigation measures that would be similar to the mitigation required for the Project to reduce impacts.

Cultural Resources

Under the Reduced Project Alternative, the impact area would be reduced by 3.5 acres. The Reduced Project Alternative would reduce potential impacts to undiscovered cultural resources, tribal cultural resources and undiscovered human remains considering the impact area would be reduced. Given this alternative would reduce impacts by 3.5 acres, or 25% relative to the Project, this reduction in potential impacts to undiscovered cultural resources and tribal cultural resources would be substantial. Thus, the Reduced Project Alternative's impacts to undiscovered cultural resources, tribal cultural resources and undiscovered human remains would be less than the Project. Nonetheless, these impacts would remain potentially significant.

Overall, the Reduced Project Alternative would potentially impact 3.5 acres less area that could contain potential archaeological sites. Thus, this alternative would lessen potential impacts to important archeological sites when compared to the Project. Nonetheless, the impacts to the archaeological sites would be potentially significant.

The Reduced Project Alternative could implement mitigation measures to reduce impacts to less than significant, similar to the Project.

Geology, Soils, and Seismicity

The Reduced Project Alternative would reduce the impact area by 3.5 acres at the project site. As the impact area would be reduced substantially by 25%, the Reduced Project Alternative would reduce the project's significant cumulative impacts related to geologic hazards and resources or related events. However, the Reduced Project Alternative's cumulative geologic impacts would remain potentially significant. These impacts could be reduced through implementation of mitigation measures like complying with the final site-specific geotechnical report recommendations that demonstrate compliance with the California Building Code requirements to bring impacts to a less than significant level, similar to the Project.

the Reduced Project Alternative would have a reduced impact area relative to the Project, as this alternative would be 25% smaller than the proposed Project. As such, this alternative would present a reduction of impact area to potential mineral resources of 3.5 acres when compared to the Project. However, since there are no mineral resources on the Project site, this alternative would not impact known mineral resources similar to the proposed Project.

Hazardous Materials and Resources

While potential hazardous materials impacts would be reduced because the development footprint would be reduced by 3.5 acres and the construction period would be reduced from 18 to 15 months, the Reduced Project Alternative would continue to have potentially significant impacts similar to that of the Project. Potential impacts related to operational-related and construction-related hazardous materials use, accidental release of hazards and fire hazards would still occur under this alternative. The Reduced Project Alternative would also be required to implement the BMPs, training, worker health and safety plans as the proposed Project. Also, similar to the Project, the development under this alternative would be required to abide by the construction and operational design measures of a fire technical report. Thus, hazards and hazardous materials impacts due to the Reduced Project Alternative would be less than significant with implementation of measures, similar to the Project.

Land Use

Like the Project, the Reduced Project Alternative is anticipated to have less than significant impacts related to land use and planning because it will not divide an established community and will comply and/or be consistent with all applicable land use and planning documents. Overall, land use impacts would be the same under the Reduced Project Alternative as the Project.

In addition, historical resources indicate that the site was previously used for agriculture from approximately 1938 to 2012. However, pursuant to the Department of Conservation maps, the project site is Urban and Built-Up land. Therefore, similar to the Project, the Reduced Project Alternative would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use. There are also no Williamson Act contracts on the project site and no forestry resources. Thus, no agricultural or forestry impacts would occur under the Reduced Project Alternative the same as the Project.

Noise

The Reduced Project Alternative would reduce the development footprint by 3.5 acres. The construction period would also be slightly shorter under the Reduced Project Alternative when compared to the Project (15 vs. 18 months). Thus, the construction and operational noise impacts under the Reduced Project Alternative would be

slightly less than that of the Project, including potential significant impacts associated with operational noise and construction-related noise. The Reduced Project Alternative could implement mitigation measures to reduce these impacts to less than significant, similar to the Project.

Paleontological Resources

The Reduced Project Alternative would reduce the impact area by 3.5 acres, which would also reduce the potential impacts to paleontological resources as a result of grading. The avoidance of the 3.5-acre area would reduce impacts to any areas designated as sensitive for paleontological resources. Considering a reduction would occur to the area, the Reduced Project Alternative reduction would potentially reduce the paleontological resource impact relative to the Project. Nonetheless, the Reduced Project Alternative would require fewer cubic yards of grading and would therefore result in a potentially significant impact to paleontological resources. The Reduced Project Alternative could implement mitigation measures to reduce the impact to less than significant, similar to the Project.

Public Health

The Reduced Project Alternative would require less construction activities than the Project, which would reduce air quality emissions and other public health hazards during construction. The reduction of the development footprint by about 3.5 acres (25%) under the Reduced Project Alternative would reduce emissions and other public health hazards, as the construction efforts would be reduced relative to the Project. The duration of construction would be slightly reduced under this Reduced Project Alternative relative to the Proposed Project (15 months vs. 18 months), but the per day activities are expected to be similar to the Project. Thus, it is expected that the Reduced Project Alternative's impacts related to would be similar to the Project in that commissioning and operation of this alternative would also not result in significant incremental health risks.. The Reduced Project Alterative could also implement project design features that would help reduce potential toxic air pollutants and impacts related to legionella to less than significant levels, similar to the Project.

Socioeconomics

No occupied housing currently exists on the project site that would be displaced by the Reduced Project Alternative. This alternative includes a slightly smaller batter energy storage facility that would be unmanned and constructed by workers within the local area, similar to the Project. Thus, no population increase would be anticipated in the Project area. The Reduced Project Alternative would result in the same impacts related to population and housing of that of the Project. The reduced project alternative would result in an approximately 25% reduction in economic benefits to the City, County and State in tax revenues and a reduction in local employment revenues.

In addition, the Reduced Project Alternative would generate a similar demand for public services as the Project as it would construct similar battery energy storage facilities. The existing public service infrastructure would not require improvements in order to provide adequate public services to the Reduced Project Alternative similar to the Project. As such, public services impacts would be less than significant similar to the Project.

Soils

The Reduced Project Alternative would reduce the impact area by 3.5 acres at the project site. As the impact area would be reduced substantially by 25%, the Reduced Project Alternative would substantially reduce the

project's significant impacts related to soil erosion and other significant soil properties. However, the Reduced Project Alternative's geologic impacts would remain potentially significant. These impacts could be reduced through implementation of the BMPs in the project-specific SWPPP and implementation of mitigation measures like abiding by the recommendations of a final site-specific geotechnical report to bring impacts to a less than significant level, similar to the Project.

Transportation

The operation of the Project is conservatively estimated to generate four (4) total weekly trips and nominal peak hour trips. Therefore, the operation of the Project would not generate a significant number of trips and thereby would not cause a substantial amount of VMT. Impacts would be less than significant. The Reduced Project Alternative would generate a similar VMT during operations as compared to the Project and transportation impacts under the Reduced Project Alternative would be the same and would be less than significant.

Visual Resources

Under the Reduced Project Alternative, the battery energy storage system's development footprint would be decreased by 3.5 acres. This reduction represents a reduction of 25% of the Project's development footprint, which would reduce the scale and acreage of the battery energy storage system facility. Thus, the impacts to visual character and quality would be less than the proposed Project. Nonetheless, similar to the proposed Project, the Reduced Project Alternative would likely have the same screening mechanisms built into the design such as a 10-foot-tall decorative perimeter wall, 20-feet of landscape buffer and decorative trellises. This alternative's reduction of the development footprint by 3.5 acres would eliminate some of the battery storage enclosures and may reduce the size of the decorative perimeter wall needed. Thus, the Reduced Project Alternative development may result in a slight reduction to impacts relative to the proposed Project, as it would provide a smaller visual buffer and would retain more area as unencumbered land on the project site. In addition, the Reduced Project Alternative would result in additional nighttime lighting in the area similar to the proposed Project; thus, impacts from light and glare would remain less significant under this alternative.

Waste Management

The Reduced Project Alternative would generate fewer demands for nonhazardous and hazardous materials waste than the proposed Project. With the development of a slightly smaller battery energy storage system, this alternative would result in a decrease in waste management services required. This alternative would likely implement mitigation measures similar to the proposed Project. Therefore, alternative facilities would be less than significant with mitigation like the proposed Project. Overall, the Reduced Project Alternative would have fewer potential impacts on waste management systems compared to the Project.

Water Resources

The Reduced Project Alternative would reduce the impact area by 3.5 acres. Similar to the Project, potentially significant water resources impacts associated with drainage, runoff, water quality and flooding would occur but to a lesser extent. These impacts could be reduced to below a level of significance with implementation of implementation of BMPs and compliance with regulations similar to the Project.

In addition, the Reduced Project Alternative would generate fewer demands for utilities and service systems including water, wastewater and stormwater. With the development of a slightly smaller battery energy storage

system, this alternative would result in a decrease in water demand because less irrigation and dust suppression during construction. In addition, same as the Project, the Reduced Project Alternative would not require wastewater treatment, potable water, or operational solid water services, and the impacts would remain less than significant. Overall, the Reduced Project Alternative would have fewer potential impacts on water resources compared to the Project.

Wildfire

While potential wildfire impacts from the Reduced Project Alternative would be slightly less because the development footprint would be reduced by 3.5 acres, this alternative would have potentially significant wildfire impacts similar to that of the Proposed Project. Potential impacts related to operational-related wildfire risk, construction-related wildfire risk and the installation or maintenance of associated infrastructure that may result in fire risk during construction and operation would still occur under this Alternative. The Reduced Project Alternative would be required to implement similar mitigation measures as the proposed Project. Thus, wildfire impacts due to the Reduced Project Alternative would be less than significant with implementation of mitigation, similar to the Proposed Project.

Woker Health and Safety

While potential impacts would be slightly reduced because the development footprint would be reduced by 3.5 acres, this alternative would have less than significant impacts similar to that of the Project with the implementation with worker health and safety plans and programs. Potential impacts related to operational-related fire risk and construction-related fire risk, or the installation or maintenance of associated infrastructure that may exacerbate fire risk during construction and operation would still occur under this alternative. The Reduced Project Alternative would be required to implement the fire protection measures in a project-specific fire technical report, similar to the Project. Also similar to the Project, the development under this alternative would be required to ensure all worker health and safety plans and programs are implemented. Thus, worker health and safety impacts due to the Reduced Project Alternative would be less than significant, similar to the Project.

5.7.3 Summary of the Reduced Project Alternative Analysis

The Reduced Project Alternative would reduce the development footprint from 14 acres to 10.5 acres. The reduction of the development footprint by 3.5 acres would reduce impacts to the following environmental resources areas: air quality, biological resources, cultural resources, geologic hazards, hazardous materials and resources, noise, paleontological resources, public health, soils, traffic, visual resources, waste management, water resources, and wildfire. Many of these impacts could be reduced to less than significant with implementation of mitigation measures.

This alternative would generally meet all project objectives, although not to the degree that the Proposed Project would. The Reduced Project Alternative would result in approximately 50 percent less battery energy storage MW capacity, and therefore, it would not achieve Project objective 1 to the extent of the Project.

5.8 Summary of Alternatives

A summary of impacts of the alternatives compared to the Project by resource topic is included in Table 5-1 below.

Table 5-1. Summary of Alternatives to the Project

Issue Area	Proposed Project	No Project		Reduced Project
		No Development-No Project	Buildout No Project	
Air Quality				
Screening Analysis	LTS	▼	▲	=
Operations Impact Analysis	LTS	▼	▲	▼
BESS Commissioning Impact Analysis	LTS	▼	▲	▼
Fumigation Analysis	LTS	▼	▲	▼
Biological Resources				
Construction Impacts to Sensitive Vegetation	NI	▼	▲	▼
Construction Impacts to Special-Status Plant Species	NI	▼	▲	▼
Construction Impacts to Special-Status Wildlife Species	LTS	▼	▲	▼
Construction Impacts to Wildlife Corridors	LTS	▼	▲	=
Construction Impacts to Wetlands and WOTUS	LTS	▼	▲	=
Operation Impacts Noise and Light	LTS	▼	▲	▼
Operation Impacts Collision and Electrocution Hazard to Wildlife	LTS	▼	▲	▼
Operation on Special Status Species Plants	NI	▼	▲	=
Operation impacts to sensitive and special-status wildlife species noise	LTS	▼	▲	=
Operation impacts to sensitive and special-status wildlife species lighting and habitat	LTS	▼	▲	=
Operation to Wetlands and WOTUS	NI	▼	▲	=
Cumulative	LTS	▼	▲	▼
Cultural Resources				
Cultural Construction impacts	LTS	▼	=	▼
Cultural Operation Impacts	NI	▼	=	▼
Cumulative	LTS	▼	=	▼
Geologic Hazards and Resources				
Geologic Hazards	LTS	▼	▲	▼
Geological Resources (minerals)	NI	▼	=	=
Cumulative	SM	▼	▲	▼
Hazardous Materials and Resources				
Transportation of Hazardous Materials	LTS	▼	▲	▼
Hazardous Materials Use Construction	LTS	▼	▲	▼
Hazardous Materials Use Operation	LTS	▼	▲	▼
Accidental Release Hazards	LTS	▼	▲	▼
Schools and Sensitive Receptors	LTS	▼	=	▼
Cortese List	NI	▼	=	=
Effects on Emergency Response Plans	LTS	▼	▲	▼
Cumulative	LTS	▼	▲	▼

Table 5-1. Summary of Alternatives to the Project

Issue Area	Proposed Project	No Project		Reduced Project
		No Development-No Project	Buildout No Project	
Land Use				
Divide an Established Community	LTS	▼	=	=
Conflict with an Applicable Land Use Plan	LTS	▼	=	=
Convert Farmland to Non-agricultural uses	LTS	▼	=	=
Cumulative	LTS	▼	=	=
Noise				
Noise Construction Impacts - temporary increase in ambient	LTS	▼	▲	▼
Noise Operation Impacts - operation increase in ambient	LTS	▼	▲	▼
Cumulative Noise in Excess of Standards	LTS	▼	▲	▼
Cumulative	LTS	▼	▲	▼
Paleontological Resources				
Paleo Young Axial-Channel Deposits	LTS	▼	=	▼
Paleo Young landslide deposits	LTS	▼	=	▼
Paleo Questionable Young Landslide Deposits	LTS	▼	=	▼
Paleo Siltstone Facies of the Capistrano Formation	LTS	▼	=	▼
Cumulative	LTS	▼	=	▼
Public Health				
Cancer Risk	LTS	▼	▲	▼
Non-Cancer Risk	LTS	▼	▲	▼
Construction and Commissioning Phase Effects	LTS	▼	▲	▼
Operational Phase Effects	LTS	▼	▲	▼
Characterization of Risks from Toxic Air Pollutants	LTS	▼	▲	▼
Cumulative	LTS	▼	▲	▼
Socioeconomics				
Construction - Induce substantial growth of concentration of population	LTS	▼	▲	=
Construction - Displace a large number of people or impact existing housing	LTS	▼	=	=
Construction - Result in substantial adverse impacts on educational facilities	NI	▼	=	=
Construction - Result in Substantial adverse impacts on provision of utility services	LTS	▼	▲	=
Construction – Result in substantial adverse impacts on the provision of public services	LTS	▼	▲	▼
Operation - Induce substantial growth concentration of population	NI	▼	▲	=
Operation - Displace a large number of people or impact existing housing	NI	▼	=	=

Table 5-1. Summary of Alternatives to the Project

Issue Area	Proposed Project	No Project		Reduced Project
		No Development-No Project	Buildout No Project	
Operation - Result in Substantial Adverse Impacts on the Local Economy and Employment	LTS	▼	▲	=
Operation - Result in Substantial Adverse Impacts on Educational Facilities	NI	▼	▲	=
Operation - Result in Substantial Adverse Impacts on Provision of Utility Service	NI	▼	▲	=
Result in Substantial Adverse Impacts on the Provision of Public Services	LTS	▼	▲	=
Environmental Justice	LTS	▼	▲	=
Cumulative	LTS	▼	▲	=
Soils				
Farmland Conversion	LTS	▼	=	=
Jurisdictional Wetlands	NI	▼	▲	▼
Soil Erosion during construction	LTS	▼	=	▼
Other significant soil properties	LTS	▼	▲	▼
Compaction during construction and operation	LTS	▼	▲	▼
Effects of Emissions of Soil-Vegetation Systems	NI	▼	▲	▼
Cumulative	LTS	▼	▲	▼
Traffic and Transportation				
LOS Construction Traffic Generation	NI	▼	▲	=
Intersection LOS with Construction Traffic	NI	▼	▲	=
Truck Turn Analysis	LTS	▼	▲	=
Operational VMT	Not required	▼	▲	=
Construction VMT	NI	▼	▲	=
Transport of Hazardous Materials	LTS	▼	▲	▼
Public safety	NI	▼	▲	▼
Air Traffic	NI	▼	=	=
Emergency Vehicle Access	LTS	▼	▲	▼
Parking	NI	▼	▲	▼
Cumulative	LTS	▼	▲	▼
Visual Resources				
Public Views	LTS	▼	▲	▼
Scenic Highways	NI	▼	=	=
Light and Glare	LTS	▼	▲	▼
Conformity with Regulations Governing Scenic Quality	NI	▼	▲	=
Cumulative Effects	LTS	▼	▲	▼
Waste Management				
Cortese List	NI	▼	=	=

Table 5-1. Summary of Alternatives to the Project

Issue Area	Proposed Project	No Project		Reduced Project
		No Development-No Project	Buildout No Project	
Nonhazardous Waste Disposal during construction	LTS	▼	▲	▼
Hazardous Waste Disposal during construction	LTS	▼	▲	▼
Nonhazardous Waste Disposal during operation	LTS	▼	▲	▼
Hazardous Waste during operations	LTS	▼	▲	▼
Cumulative	LTS	▼	▲	▼
Water Resources	**LTS**			
Water Quality	LTS	▼	▲	▼
Flooding Potential	LTS	▼	▲	▼
Water Supply	LTS	▼	▲	▼
Wastewater Collection, Treatment discharge and disposal	NI	▼	▲	▼
Stormwater Runoff and Drainage	LTS	▼	▲	▼
Cumulative	LTS	▼	▲	▼
Wildfire				
Impair Emergency Response Plan or emergency evacuation Plans	LTS	▼	▲	▼
Exacerbate Wildfire Risks	SM	▼	▲	▼
Require installation or maintenance of associated infrastructure that may exacerbate fire risk	SM	▼	▲	▼
Expose people and structures to significant risks	LTS	▼	▲	=
Cumulative	LTS	▼	▲	=
Worker Health and Safety				
Construction Phase	LTS	▼	=	=
Operational Phase	LTS	▼	=	=

▲ Alternative is likely to result in greater impacts to issue when compared to Proposed Project.
= Alternative is likely to result in similar impacts to issue when compared to Proposed Project.
▼ Alternative is likely to result in reduced impacts to issue when compared to Proposed Project.
LS = less than significant without mitigation; SM = less than significant with mitigation measures; SU = potentially significant and unavoidable impact

A summary of the alternatives compared to the Project-by-Project Objective is provided in Table 5-2 below.

Table 5-2. Alternatives Summary Relative to Project Objectives

Project Objective	Proposed Project	No Project		Reduced Project Alternative
		No Development-No Project	Buildout No Project	
1 Develop a utility-scale battery energy storage system with a rated capacity of up to 250 MW and 1,000 MWh to reliably capture and	Yes	No	No	No

Table 5-2. Alternatives Summary Relative to Project Objectives

Project Objective	Proposed Project	No Project		Reduced Project Alternative
		No Development-No Project	Buildout No Project	
manage electricity in an economically feasible and commercially financeable manner.				
2 Use a proven and established battery energy storage system technology that is safe, efficient, commercially available, and has low maintenance requirements.	Yes	No	No	Yes
3. Assist California by facilitating deployment of additional renewable energy resources in furtherance of: A. U.S. DOE's goals and targets to reduce the cost of grid-scale, long-duration energy storage and accelerate breakthroughs that store clean electricity to make it available anytime, anywhere and support more abundant, affordable, and reliable clean energy solutions. B. President Biden's goal of 100 percent clean electricity by 2035. C. California's RPS and climate objectives, as mandated under Senate Bill 100 and Governor Newsom's California Clean Energy Transition Plan, by providing energy storage that allows RPS-qualified renewable electricity to be stored and discharged to the market upon demand and displacing older and less efficient generation. D. Other state goals to expedite development of renewable energy and storage. In 2022, California legislature set intermediate targets of 90% renewable energy and zero-carbon electricity by the end of 2035 and 95% by the end of 2040 on the way to the eventual target of 100% by 2045. E. CEC goals and targets for renewable energy and storage to meet California's goal of zero carbon emissions by 2045. F. CPUC adopted Decision 21-06-035 recognizing the need for energy storage resources. G. City of San Juan Capistrano and Orange County's clean energy goals.	Yes	No	No	Yes

Table 5-2. Alternatives Summary Relative to Project Objectives

Project Objective	Proposed Project	No Project		Reduced Project Alternative
		No Development-No Project	Buildout No Project	
4. Locate a utility-scale battery energy storage system in an area that maximizes electricity delivery to the 138kV Trabuco to Capistrano transmission line, satisfies CAISO deliverability requirements to sell Resource Adequacy and is capable of being completed by summer 2026.	Yes	No	No	Yes
5. Create reliable, dispatchable generation as a firm, dispatchable resource for southern Orange County by increasing the ability of load-serving entities and system operators to effectively manage intermittent renewable generation on the grid.	Yes	No	No	Yes
6. Provide economic benefit to the City of San Juan Capistrano and Orange County through construction jobs, property and sales taxes, construction and maintenance services, community benefits, and increased energy reliability.	Yes	No	Yes	Yes
7. Design the Project in a manner that will minimize adverse impacts to natural resources, reduce carbon emissions and improve air quality.	Yes	No	Yes	Yes

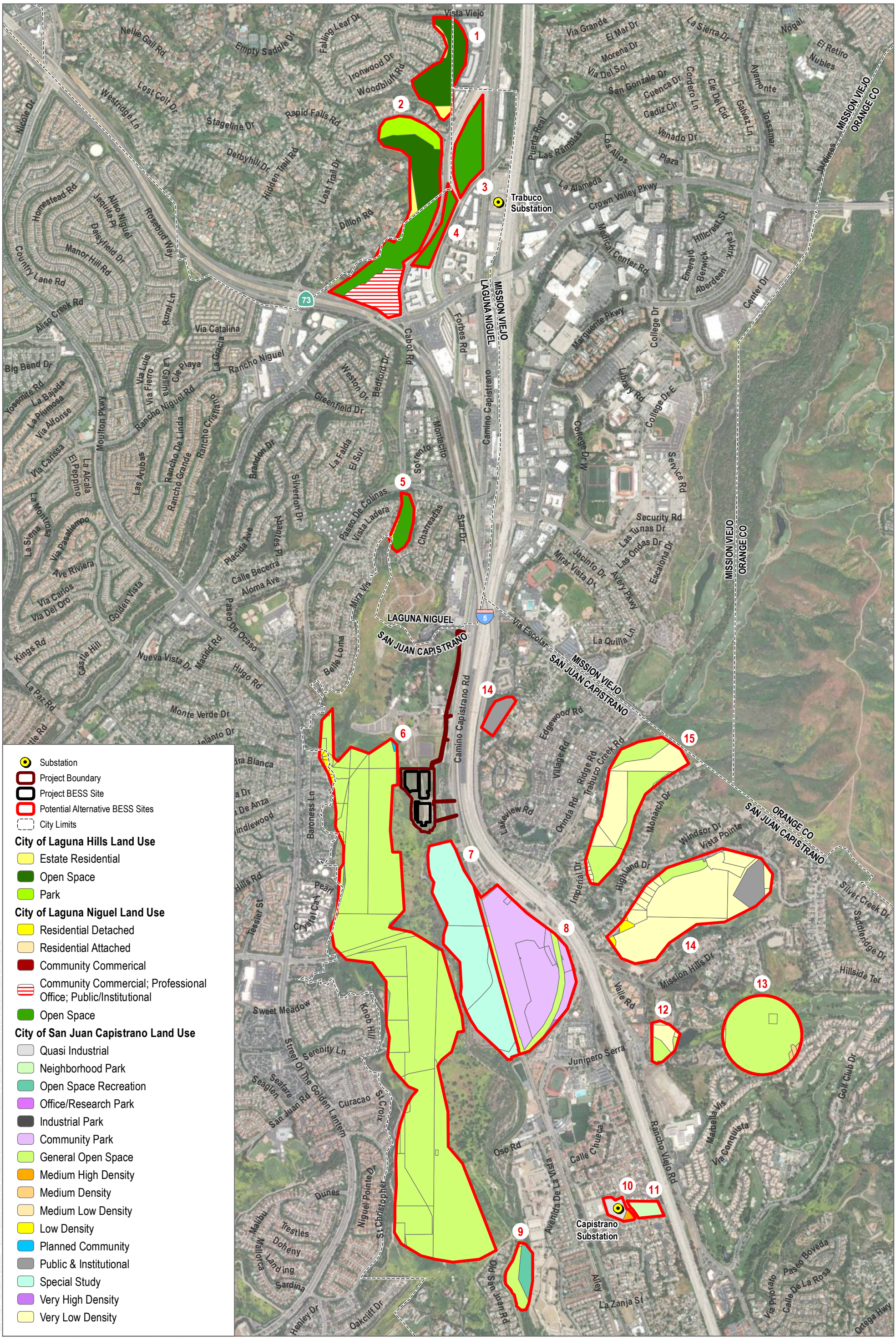

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FIGURE 5-1A

Alternative Locations Land Use

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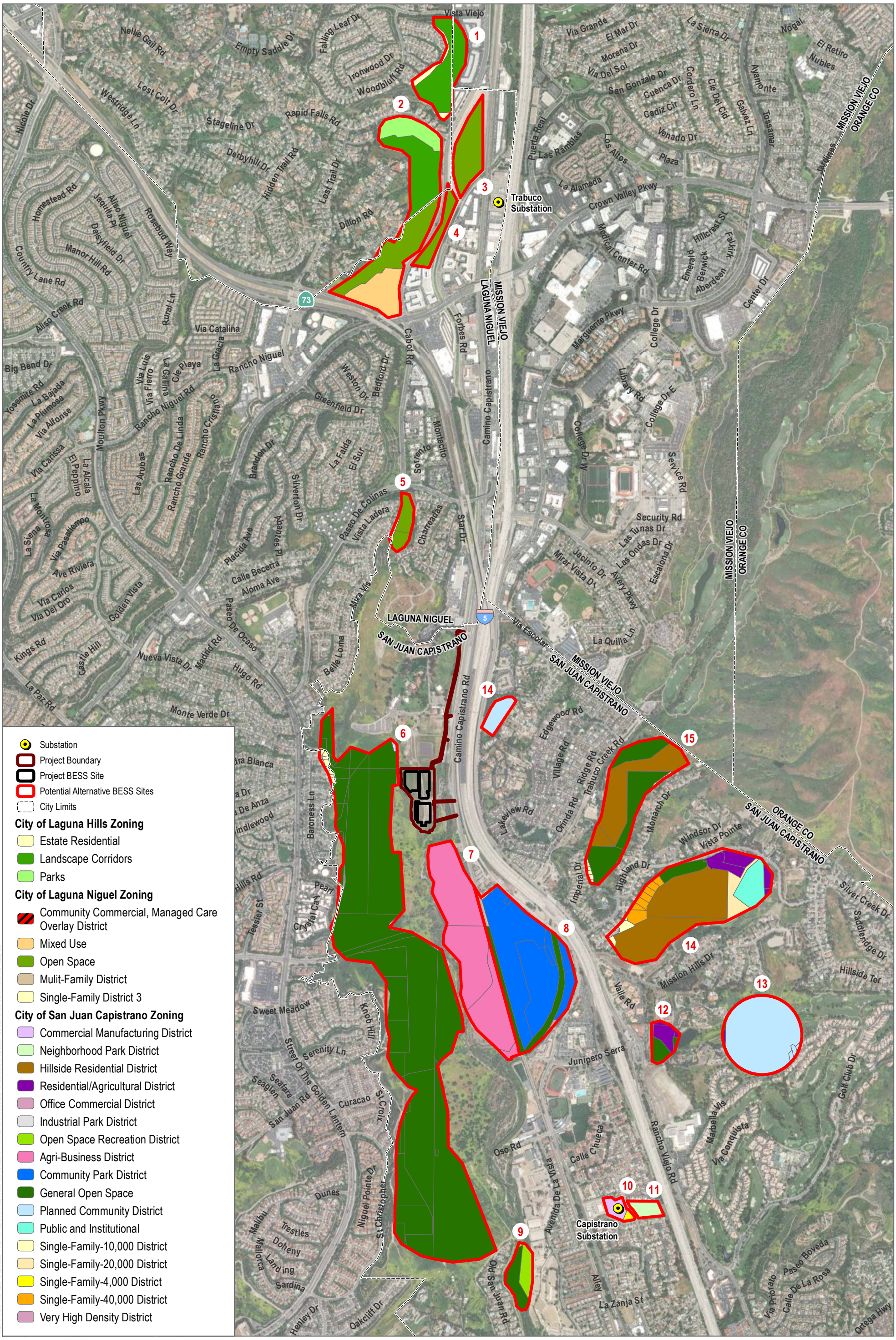

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FIGURE 5-1B

Alternative Locations Zoning

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