ES.1 PROJECT BACKGROUND

California is a national leader in requiring a significant proportion of electricity to come from renewable sources. In 2002, California established a Renewable Portfolio Standard (RPS) requiring electric utilities in the State to increase procurement of eligible renewable energy resources to achieve a target of 20 percent of their annual retail sales by the year 2010. In 2008, by Executive Order (S-14-08), then Governor Arnold Schwarzenegger increased that target to 33 percent by the year 2020. In 2011, Governor Jerry Brown signed Senate Bill (SB) X1-2 into law. This statute requires all California electric utilities, including investor-owned utilities (IOUs), energy service providers, and community choice aggregators (CCAs), to procure 33 percent of their annual retail sales from renewable sources over a three-stage compliance period. In 2015, Governor Brown signed SB 350, which increased the RPS goal to 50 percent by 2030.

With California's 50 percent RPS mandate, combined with other mandated RPS requirements and regional sales growth, the total renewable energy sales for the United States portion of the Western Electricity Coordinating Council region has been estimated at close to 150,000 giga-watt hours (GWH) by 2020 (not including Idaho, Utah and Wyoming).

Solar energy as harnessed through the use of photovoltaic (PV) technology represents a primary form of renewable energy currently being produced in the Imperial Valley. The Campo Verde Solar Project, which is capable of generating 147 megawatts (MW) of electricity, is helping California meet its statutory and regulatory goals for renewable electricity generation.

In conjunction with the generation of solar energy, utilities have been mandated to develop energy storage. In 2013, the California Public Utilities Commission (CPUC) issued an order requiring the three large electric IOUs to procure 1,325 MWs of energy storage by 2020, with installation completed by 2024. To this end, Southern Power Company (i.e. the Applicant) submitted an application to the Imperial County Planning and Development Services Department (ICPDSD) on May 16, 2016, to amend Conditional Use Permit (CUP) 11-0007 to allow the construction and operation of a 105 megawatt-hour (MWH) battery energy storage system at its Campo Verde Solar Project. The ability of Campo Verde Solar Project to store energy and sell dispatchable energy when it is needed will allow utilities the ability to smooth their generation profiles, which reduces the need for the utilities to call upon other resources to support the intermittency of renewable resources. The Campo Verde Battery Energy Storage System is proposed to help provide the infrastructure needed to meet the energy storage mandates of the California Legislature and CPUC. Under the mandate, load-serving entities are required to procure energy storage to help reduce greenhouse gas (GHG) emissions, integrate more intermittent solar and wind energy into the electrical grid, manage peak power needs and defer expensive infrastructure upgrades.

On June 27, 2016, a Notice of Preparation (NOP) for the Campo Verde Battery Energy Storage System Supplemental Environmental Impact Report (SEIR) was issued by the Imperial County Planning and Development Services Department (ICPDSD). The comment period closed on July 26, 2016. A total of six comment letters were received including two after the close of the comment period (refer to Chapter 1.0, subsection 1.7).

ES.2 PROJECT OVERVIEW

The proposed Project is a utility-scale battery energy storage facility incorporating traditional lithium ion batteries. The proposed Battery Energy Storage System represents a complementary

use to the Campo Verde Solar Project which will be located within the footprint of the existing Campo Verde Solar Project, west of the Campo Verde Substation and south and east of one of the solar array fields. The Substation is located west of Liebert Road, south of Wixom Road and north of Mandrapa Road. The Project is proposed to be constructed in two phases. Phase 1 of the proposed Project will be designed to store up to 5 MWH of energy while Phase 2 will be designed to store up to 100 MWH of energy. When complete, the system would be capable of storing up to 105 MWH of energy. Both phases will be designed to receive solar-generated electricity during times of excess generation or times of less desirable generation and store that power for release when the customer deems it to be more valuable. The system thus becomes a valuable tool in allowing the customer and system operator to manage intermittent renewable generation and convert it into reliable, dispatchable generation. Phase 1 construction is anticipated to begin in late 2016 with completion expected in early 2017. Phase 2 construction is expected to occur in 2018.

ES.3 PROPOSED PROJECT

PHASE 1

Phase 1 of the proposed Project will be designed to store up to 5 megawatt-hours (MWH) of energy. Phase 1 will consist of an approximately 424 square foot (sq. ft.) metal modular battery system container placed on a concrete foundation housing 440 modules and 13,200 batteries (Southern Power Company 2016). Other components will be located adjacent to the battery system container. These components include the power conversion system (PCS) cabinets and transformer; supervisory control and data acquisition (SCADA) cabinet; power distribution panel; and the station service transformer (refer to Figure 2.0-5A and 2.0-5B in Chapter 2.0, Project Description). The components will be spaced to provide isolation as well as access and occupy approximately 707 sq. ft. No offices or staffed control centers will be located within the container or other components. Two Heating Ventilation and Air Conditioning (HVAC) units will be required: one for the container and one for the SCADA cabinet.

The wiring extending from the battery containers to connect the PCS to the transformers and ultimately to the Campo Verde Substation will be placed underground in trenches. Alternatively, the wiring could be strung overhead. The maximum length that wires would extend either underground or overhead is 50 in linear feet. The wiring would not span any roads or canals. The preferred method would be to install the wiring underground which would require a trench at least 36 inches (3 feet) in depth. The wiring from the battery containers in Phase 1 to the Campo Verde Substation will follow the sequence below:

- Container/Building to PCS Distance approximately 15 linear feet; Preferred: underground; Alternative: overhead using two poles.
- PCS to Transformer Distance approximately 15 linear feet; Preferred: underground; Alternative: overhead using two poles.
- Transformer to Switchgear Distance approximately 20 linear feet; Preferred: underground; Alternative: overhead using two poles.
- Switchgear to Raceway Distance approximately 150 linear feet; overhead using two poles. (No alternative).
- Empty Raceway to Substation Distance 100 linear feet; Preferred: underground using existing raceway; Alternative: overhead using two poles.

PHASE 2

Phase 2 of the proposed Project will be designed to store up to 100 MWH of energy. Phase 2 will consist of a 12,300 square foot (sq. ft.) metal building with battery racks on a concrete foundation housing 8,800 modules and 264,000 batteries. No offices or staffed control centers will be located within the building. Other components will be located adjacent to the battery system container. These components include the PCS cabinets and transformers, eight HVAC units, power distribution panel, and electrical switch gear (refer to Figure 2.0-6A and 2.0-6B in Chapter 2.0, Project Description). The building and components will occupy approximately 16,068 sq. ft. of ground space.

As with Phase 1, the wiring extending from the battery containers to connect the PCS to the transformers and ultimately to the Campo Verde substation will be placed underground in trenches. Alternatively, the wiring could be strung overhead. The maximum length that wires would extend either underground or overhead is 50 in linear feet. The wiring would not span any roads or canals. The preferred method would be to install the wiring underground which would require a trench at least 36 inches (3 feet) in depth. The wiring from the Phase 2 battery structure to the Campo Verde Substation will follow the sequence below:

- Container/Building to PCS Distance approximately 15 linear feet; Preferred: underground; Alternative: overhead using two poles.
- PCS to Transformer Distance approximately 15 linear feet; Preferred: underground; Alternative: overhead using two poles.
- Transformer to Switchgear Distance approximately 20 linear feet; Preferred: underground; Alternative: overhead using two poles.
- Switchgear to Raceway Distance approximately 150 linear feet; overhead using two poles. (No alternative).
- Empty Raceway to Substation Distance 100 linear feet; Preferred: underground using existing raceway; Alternative: overhead using two poles.

ES.4 PROJECT OBJECTIVES

Section 15124 of the CEQA Guidelines requires that the EIR include a statement of objectives sought by the proposed project. These objectives identify the underlying purpose of the project and provide a basis for identification of alternatives evaluated in the EIR. A clearly written statement of objectives allows the lead agency to develop a reasonable range of alternatives to evaluate in the EIR and aids the decision-makers in preparing findings or a statement of overriding considerations, if necessary.

Southern Power Company, majority owner of Campo Verde Solar, LLC, proposes to install a utilityscale Battery Energy Storage System on the existing site of the Campo Verde Solar Project and contract with a load-serving entity to buy electricity generated by the solar facility and stored in the batteries. The following objectives have been identified for the proposed Project:

- To allow for the storage and sale of renewable power that the Campo Verde Solar Project is capable of generating to help meet energy needs.
- To be able to receive solar-generated electricity during times of excess generation or times of less desirable generation and store that power for release when the customer (load-serving entity) deems it to be more valuable.

- To be a valuable tool in allowing the customer and system operators to manage and convert intermittent renewable generation and into reliable, dispatchable generation.
- To build on available land previously disturbed during construction of the Campo Verde Solar Project, thus minimizing environmental and land impacts.

ES.5 ALTERNATIVES

This EIR considered three alternatives in addition to the proposed Project:

Alternative 1 – Phase I South of Diehl Road in Block 01 Alternative Phase 1 South of Diehl Road in Block 1

Alternative 1 is located in the area south of Diehl Road in the north section of Block 1. This location would only accommodate Phase 1. A 1,400-yard (4,200 linear feet) gravel access road would need to be constructed off of Diehl Road from an existing gate to the site. Wiring from the Battery Energy Storage System would be connected to an existing Photovoltaic System Control box at this location which is currently connected to the Substation.

ALTERNATIVE 2 – PHASE 1 ALONG DIEHL ROAD AT THE NORTH SECTION OF BLOCK 4B

Alternative 2 is located along Diehl Road at the north section of Block 4B. This location would only accommodate Phase 1. A 90-yard (270 linear feet) access road would need to be constructed off of Diehl Road from an existing gate to the site. Wiring from the Battery Energy Storage System would be connected to an existing Photovoltaic System Control box at this location which is currently connected to the Substation.

NO ACTION ALTERNATIVE

Under this alternative, the proposed Battery Energy Storage System would not be constructed nor would an amendment to CUP 11-0007 be requested. The Project site would remain in its existing state as undeveloped land within the Campo Verde Solar Project site to the west of the Substation.

ES.6 SUMMARY OF IMPACTS

Table ES-1 summarizes the environmental impacts resulting from the proposed Project pursuant to CEQA Guidelines Section 15123(b)(1).

TABLE ES-1 SUMMARY OF IMPACTS

IMPACT	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF IMPACT/ SIGNIFICANCE AFTER MITIGATION
AIR QUALITY/GREENHOUSE GAS EMISSIONS			
Conflict With or Obstruct Air Quality Plan Impact 4.1.1 Implementation of the proposed Project would increase air pollutant emissions, but would not exceed ICAPCD thresholds. Therefore, impacts with regard to obstructing of an air quality plan are considered less than significant.	LTS	None required.	Not applicable.
Violate Any Air Quality Standard/Contribute to an Existing Air Quality Violation Impact. 4.1.2 The proposed Project would create short-term construction emissions, but would not violate any air quality standards or significantly contribute to existing or project air quality violations. Therefore, impacts associated with violating air quality standards or contributing to existing or project air quality violations are considered less than significant.	LTS	None required.	Not applicable.

LTS = Less than Significant LCC = Less than Cumulatively Considerable PS = Potentially Significant CC = Cumulatively Considerable SU = Significant and Unavoidable

NI = No Impact

ІМРАСТ	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF IMPACT/ SIGNIFICANCE AFTER MITIGATION
Result in Cumulatively Considerable Net Increase of Criteria Pollutant Impact 4.1.3 The proposed Project would generate criteria pollutant emissions during construction. However, the Project would not exceed ICAPCD emission threshold levels. Therefore, the proposed Project would result in a less than cumulatively considerable impact with regard to a cumulatively considerable net increase of criteria pollutant.	LCC	None required.	Not applicable.
Greenhouse Gas Emissions Impact 4.1.4 The proposed Project would generate GHG emissions during construction and decommissioning However, the amount generated would not exceed 900 metric tons per year and none would be generated during Project operation. Therefore, GHG emission impacts are considered less than significant.	LCC	None required.	Not applicable.

TABLE ES-1 SUMMARY OF IMPACTS

LTS = Less than Significant

LCC = Less than Cumulatively Considerable

NI = No Impact

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PS = Potentially Significant

IMPACT	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF IMPACT/ SIGNIFICANC AFTER MITIGATION
BIOLOGICAL RESOURCES			
Impacts to Special-Status Species – Plants Impact 4.2.1 The proposed Battery Energy Storage System site has been previously disturbed in association with construction of the Campo Verde Solar Project. The Project site is currently undeveloped and vacant with some grasses and vegetation present. Because the site has been previously scraped and leveled, no impacts to special status plant species are expected to occur in association with Project construction, operation or decommissioning.	NI	None required.	Not applicable.
Impacts on Special Status Species – Birds (SWFL) Impact 4.2.2 Habitat for the SWFL is approximately one- half mile from the proposed Battery Energy Storage System site. Based on this distance, impacts to SWFL as a result of project construction, operation or decommissioning are considered less than significant.	LTS	None required.	Not applicable.

TABLE ES-1

LCC = Less than Cumulatively Considerable

IMPACT	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF IMPACT/ SIGNIFICANC AFTER MITIGATION
Impacts on Special Status Species – Birds (Ridgway's Rail) Impact 4.2.3 The nearest habitat for Ridgway's Rail is almost one-half mile from the Battery Energy Storage System. Based on this distance, impacts to Ridgway's Rail as a result of construction, operation and decommissioning of the Battery Energy Storage System are considered less than significant.	LTS	None required.	Not applicable.
Impacts on Special Status Species – Birds (Greater Sandhill Crane) Impact 4.2.4 The Battery Energy Storage System is proposed on vacant, undeveloped land that has been disturbed in association with the Campo Verde Solar Project. No foraging habitat for Greater Sandhill Crane would be removed in association with construction, operation and decommissioning of the Project. Therefore, impacts to Greater Sandhill Crane are considered less than significant.	LTS	None required.	Not applicable.

TABLE ES-1 SUMMARY OF IMPACTS

LCC = Less than Cumulatively Considerable

	TABLE ES-1 SUMMARY OF IMPACTS				
	IMPACT	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF IMPACT/ SIGNIFICANCE AFTER MITIGATION	
-	Decial Status Species – Birds (MOPL) The Battery Energy Storage System is proposed on vacant land that has been disturbed in association with the Campo Verde Solar Project. No foraging habitat is present for the MOPL the Battery Energy Storage System site. Therefore, impacts to MOPL during construction, operation and decommissioning of the Project are considered less than significant.	LTS	None required.	Not applicable.	
-	pecial Status Species – Raptors (BUOW) The Battery Energy Storage System site has been disturbed in association with development of the Campo Verde Solar Project and does not contain features which would be suitable habitat for Burrowing owl. The potential exists for BUOW to be present along the Fern Canal and Westside Main canal. However, these features are set-back from the Battery Energy Storage System site. Therefore, impacts to BUOW during construction, operation and decommissioning are considered less than significant.	LTS	None required.	Not applicable.	

TABLE ES-1

LTS = Less than Significant LCC = Less than Cumulatively Considerable	PS = Potentially Significant CC = Cumulatively Considerable	SU = Significant and Unavoidable	NI = No Impact

ІМРАСТ	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF IMPACT/ SIGNIFICANCE AFTER MITIGATION
Impacts on Special Status Species-Raptors (Golden Eagles) Impact 4.2.7 The Battery Energy Storage System site has been disturbed in association with development of the Campo Verde Solar Project. Suitable nesting habitat for Golden Eagle is not present within the Battery Energy Storage System site nor would foraging habitat be affected as a result of implementing the proposed Project. Therefore, impacts to Golden Eagles during construction, operation and decommissioning are considered less than significant.	LTS	None required.	Not applicable.
Impacts on Special Status Species – Mammals (Pallid Bats and California Leaf-nosed Bats) Impact 4.2.8 The Battery Energy Storage System site has been disturbed in association with development of the Campo Verde Solar Project. Implementation of the proposed Battery Energy Storage System would not remove suitable foraging habitat for Pallid bats and California leaf-nosed bats. Therefore, impacts to Pallid bats and California leaf-nosed bats during construction, operation and decommissioning are considered less than significant.	LTS	None required.	Not applicable.
S = Less than Significant PS = Potential CC = Less than Cumulatively Considerable CC = Cumulat	lly Significant ively Considerable	SU = Significant and Unavoidable	NI = No Impact

TABLE ES-1 SUMMARY OF IMPACTS

		UMMARY OF IMP		
	IMPACT	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF IMPACT/ SIGNIFICANCE AFTER MITIGATION
Impacts on Spe Impact 4.2.9	ecial Status Species – Reptiles (FTHL) The Battery Energy Storage System site has been disturbed in association with development of the Campo Verde Solar Project. As a result, no habitat for FTHL is present within the boundaries of the Battery Energy Storage System site. Therefore, impacts to this FTHL during construction, operation and decommissioning are considered less than significant.	LTS	None required.	Not applicable.
Substantial Ad Sensitive Natur Impact 4.2.10	verse Effect on Riparian Habitat or Other ral Community The Battery Energy Storage System site has been disturbed in association with development of the Campo Verde Solar Project and does not contain riparian habitat or special status communities. Therefore, no impact to riparian habitat or other sensitive natural community would occur in association with construction, operation or decommissioning of the Battery Energy Storage System.	NI	None required.	Not applicable.

TABLE ES-1

LTS = Less than Significant LCC = Less than Cumulatively Considerable	PS = Potentially Significant CC = Cumulatively Considerable	SU = Significant and Unavoidable	NI = No Impact
Lee - Less than cumulatively considerable	cc - cumulatively considerable		

TABLE ES-1 SUMMARY OF IMPACTS

ІМРАСТ	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF IMPACT/ SIGNIFICANCE AFTER MITIGATION
SubstantialAdverseEffectonFederallyProtectedWetlandsImpact 4.2.11The Battery Energy Storage System site has been disturbed in association with development of the Campo Verde Solar Project and does not contain any waters that are considered potentially jurisdictional. Therefore, no impact to federally protected wetlands would occur in association with construction, operation or decommissioning of the Battery Energy Storage System.	NI	None required.	Not applicable.
Interfere with Migratory Fish or Wildlife Movement/Impede Native Wildlife Nursery Sites Impact 4.2.12 The Battery Energy Storage System is proposed within the boundaries of the Campo Verde Solar Project. This area is currently surrounded by a chain-link fence that inhibits the ability of medium and large mammals to move through the site. No change in wildlife movement would occur in association with construction, operation or decommissioning of the proposed Project. Therefore, this impact is considered less than significant.	LTS	None required.	Not applicable.

ІМРАСТ	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF IMPACT/ SIGNIFICANCE AFTER MITIGATION
Conflict with Local Policies or Ordinances Protecting Biological Resources Impact 4.2.13 Implementation of the Battery Energy Storage System is not anticipated to conflict with any local policies or ordinances protecting biological resources during construction, operation or decommissioning. Therefore, this impact is considered less than significant.	LTS	None required.	Not applicable.
Cumulative Impacts to Biological Resources Impact 4.2.14Implementation of the proposed Battery Energy Storage System is included in the footprint of the Campo Verde Solar Project. Cumulative impacts on special status species, sensitive natural communities, and protected waters within the Campo Verde Solar Project site were previously assessed and mitigation measures were identified. No new impacts would occur as a result of the Battery Energy Storage System. Therefore, cumulative impacts are considered less than cumulatively considerable.	LCC	None required.	Not applicable.

TABLE ES-1

LTS = Less than Significant

LCC = Less than Cumulatively Considerable

NI = No Impact

SU = Significant and Unavoidable

PS = Potentially Significant

TABLE ES-1 SUMMARY OF IMPACTS

IMPACT	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF IMPACT/ SIGNIFICANCE AFTER MITIGATION
CULTURAL RESOURCES		MM 4.3.1 If subsurface deposits believed to be cultural in origin are discovered during construction, all work must halt within a 200-foot radius of the discovery. A qualified professional archaeologist shall be retained to evaluate the significance of the find. A Native American	
Impacts to Unrecorded Subsurface Archaeological Resources Impact 4.3.1 Unrecorded subsurface archaeological resources could be damaged during construction of the Battery Energy Storage System. This is considered a potentially significant impact.	PS	monitor, following the Guidelines for Monitors/Consultants of Native American Cultural, Religious, and Burial Sites established by the Native American Heritage Commission, may also be required. Work cannot continue at the discovery site until the archaeologist conducts sufficient research and data collection to make a determination that the resource is either 1) not cultural in origin; or 2) not potentially significant or eligible for listing on the NRHP or CRHR. If a potentially-eligible resource is encountered, then the archaeologist, lead agency, and project proponent shall arrange for either 1) total avoidance of the resource, if possible; or 2) test excavations to evaluate eligibility for the CRHR and, if eligible, data recovery as mitigation. <i>Timing/Implementation: During construction and decommissioning/Field monitor, Qualified Archaeologist, if necessary</i> .	LTS
LTS = Less than Significant PS = Potentia LCC = Less than Cumulatively Considerable CC = Cumulat	l Ily Significant ively Considerable	SU = Significant and Unavoidable	NI = No Impact

TABLE ES-1			
SUMMARY OF IMPACTS			

	IMPACT	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF IMPACT/ SIGNIFICANCE AFTER MITIGATION
			Enforcement/Monitoring: Qualified archaeologist and Imperial County Department of Planning and Development Services.	
Impact 4.3.2	bsurface Human Remains Subsurface human remains could be impacted during construction of the Battery Energy Storage System. This is considered a potentially significant impact .	PS	MM 4.3.2 In the event that evidence of human remains is discovered, construction activities within 200 feet of the discovery shall be halted or diverted and the Imperial County Coroner will be notified (Section 7050.5 of the Health and Safety Code). If the Coroner determines that the remains are Native American, the Coroner will notify the Native American Heritage Commission which will designate a Most Likely Descendant (MLD) for the Project (Section 5097.98 of the Public Resources Code). The designated MLD then has 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains (AB 2641). If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (Section 5097.94 of the Public Resources Code). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the Public Resources Code). This will also include either recording the site with the NAHC or the	LTS

LCC = Less than Cumulatively Considerable

TABLE ES-1 **SUMMARY OF IMPACTS**

IMPACT	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION		LEVEL OF IMPACT/ SIGNIFICANCE AFTER MITIGATION
		appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a document with the county in which the property is located (AB 2641). Timing/Implementation: During construction and decommissioning/Field Monitor, Imperial County Coroner, if necessary. Enforcement/Monitoring: Applicant, Imperial County Department of Planning and Development Services, Imperial County Coroner.	
mpacts to Fossil Remains mpact 4.3.3 Fossil remains could be destroyed by excavation and trenching associated with construction of the Battery Energy Storage System. This is considered a potentially significant impact.	PS	MM 4.3.3 Ground-disturbing activities in the Lake Cahuilla sediments, Quaternary alluvium, and the Brawley Formation must be monitored by a qualified paleontological monitor. Paleontological monitors will be equipped to salvage fossils as they are unearthed (to help avoid construction delays) and to remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. Monitors are empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Recovered specimens will be prepared to a point of identification and permanent preservation, including washing of sediments to	LTS

LCC = Less than Cumulatively Considerable

TABLE ES-1 SUMMARY OF IMPACTS

IMPACT	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF IMPACT/ SIGNIFICANCE AFTER MITIGATION
		recover small invertebrates and vertebrates. Fossil specimens will be curated by accessioning them into an established, accredited museum repository with permanent retrievable paleontological storage. A report of findings with an appended itemized inventory of specimens will be prepared. The report and inventory, when submitted to the Imperial County Department of Planning and Development Services, along with confirmation of the curation of recovered specimens into an established, accredited museum repository, will signify completion of the program to mitigate impacts to paleontological resources. <i>Timing/Implementation: During construction and decommissioning of Phase 1 and Phase 2/Qualified Paleontological Monitor.</i> <i>Enforcement/Monitoring: Applicant and Imperial County Department of Planning and Development</i> <i>Services.</i>	

LTS = Less than Significant LCC = Less than Cumulatively Considerable PS = Potentially Significant CC = Cumulatively Considerable SU = Significant and Unavoidable

NI = No Impact

TABLE ES-1			
SUMMARY OF IMPACTS			

ΙΜΡΑCΤ	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF IMPACT/ SIGNIFICANCE AFTER MITIGATION
Cumulative Impacts to Archaeological Resources and Fossil Remains Impact 4.3.4 Implementation of the proposed Project, in combination with past, present and probable large-scale projects in the vicinity of the Campo Verde Battery Energy Storage System Project, has the potential to result in impacts to archaeological and historic resources. However, impacts are addressed on a project- by-project basis. Therefore, this is considered a less than cumulatively considerable impact.	LCC	None required.	Not applicable.
GEOLOGY AND SOILS		MM 4.4.1 Phase 1 and Phase 2 of the proposed	
Strong Seismic Ground Shaking Impact 4.4.1 The Project site is located in a seismically active region and would be subject to strong seismic ground shaking in the event of an earthquake. This is considered a potentially significant impact.	PS	Battery Energy Storage System shall be designed in accordance with seismic considerations contained in the current California Building Code, Uniform Building Code or the standards of care established by the Structural Engineers Association of California and the County of Imperial building requirements. Timing/Implementation: Prior to approval of final building plans/As part of Project design. Enforcement/Monitoring: Imperial County Department of Planning and Development Services.	LTS

LTS = Less than SignificantSS = Potentially SignificantSU = Significant and UnavoidableNI = No ImpactLCC = Less than Cumulatively ConsiderableCC = Cumulatively ConsiderableCC = Significant and UnavoidableNI = No Impact

TABLE ES-1 SUMMARY OF IMPACTS

IMPACT	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF IMPACT/ SIGNIFICANCE AFTER MITIGATION
		MM 4.4.1b For structural designs based upon the 2012 International Building Code, the following criteria shall apply. The soil site class is D. S _s , the spectral acceleration for short periods, is 1.500g. S ₁ , the spectral acceleration for a 1- second period, is 0.600g. F _a and F _v , in accordance with Table 1613.3.3(1) and 1613.3.3(2) are 1.000 and 1.500, respectively. <i>Timing/Implementation: Prior to approval of final building plans/As part of project design.</i> <i>Enforcement/Monitoring: Imperial County Department of Planning and Development</i> <i>Services.</i>	
Liquefaction/Unstable Soils Impact 4.4.2 Soils on the Project site could be subject to liquefaction as well as differential settlement if water infiltrates foundation soils. This is considered a potentially significant impact.	PS	MM 4.4.2a The structural design of foundations for Phase 1 and Phase 2 shall be based on the total post-liquefaction settlement varying from 0 to $\frac{1}{2}$ -inch at the site with $\frac{1}{4}$ -inch post-liquefaction differential settlement. Timing/Implementation: Prior to approval of final building plans/As part of project design. Enforcement/Monitoring: Imperial County Public Works Department, Engineering Division/ Imperial County Department of Planning and Development Services.	LTS
TS = Less than Significant PS = Potential LCC = Less than Cumulatively Considerable CC = Cumulat	lly Significant ively Considerable	SU = Significant and Unavoidable	NI = No Impact

IMPACT	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION M	IEASURES	LEVEL OF IMPACT/ SIGNIFICANCE AFTER MITIGATION
		MM 4.4.2b The final de Phase 2 foundations s drainage to inhibit we foundation soils. Drainage managed during construct infiltration from any source Timing/Implementation: Pri building plans/during const Phase 2 foundations. Enforcement/Monitoring: I Works Department, Engine Imperial County Departm Development Services. MM 4.4.2c Phase 1 and designed in accordance alternative footing depth bearing capacities:	hall include proper ater infiltration into shall also be properly ction to avoid water e. For to approval of final truction of Phase 1 and mperial County Public ering Division/ ent of Planning and nd Phase 2 shall be with the following	
		Footing Depth Below Finished Grade (ft)1	Allowable Bearing Capacity (psf)	
		1.5 2.0 Source: WTI 2016a, pp. 6-7.	2000 2500	

TABLE ES-1 SUMMARY OF IMPACTS

County of Imperial October 2016

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LCC = Less than Cumulatively Considerable

PS = Potentially Significant

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TABLE ES-1			
SUMMARY OF IMPACTS			

IMPACT	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF IMPACT/ SIGNIFICANCE AFTER MITIGATION
		Finished grade is the lowest adjacent grade for perimeter footings and floor level for interior footings. The allowable bearing capacities shall apply to dead loads plus design live load conditions. Minimum widths of column and wall footings shall be 24 inches and 16 inches, respectively. A one- third increase in the bearing capacity is allowable for wind or seismic loads. Timing/Implementation: Prior to approval of final building plans/As part of project design. Enforcement/Monitoring: Imperial County Public Works Department, Engineering Division/Imperial County Department of Planning and Development Services. MM 4.4.2d All footings shall be reinforced to reduce the potential for distress caused by differential foundation movements. Timing/Implementation: During construction/As part of project design. Enforcement/Monitoring: Imperial County Public Works Department, Engineering Division/ Imperial County Department of Planning and Development Services.	

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TABLE ES-1 SUMMARY OF IMPACTS

IMPACT	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF IMPACT/ SIGNIFICANCE AFTER MITIGATION
		MM 4.4.2e The geotechnical engineer or geotechnical engineer's representative shall observe the footing excavations prior to placing reinforcing steel and pouring concrete foundations to assess whether the soils exposed are similar to those anticipated for support of the footings. Any soft, loose, or unacceptable soils shall be undercut to suitable materials and backfilled with approved fill materials or lean concrete. Soil backfill shall be properly compacted. <i>Timing/Implementation: Prior to placing reinforcing steel and pouring concrete</i> foundations/Geotechnical engineer or geotechnical engineer's representative. <i>Enforcement/Monitoring: Imperial County Public</i> Works Department, Engineering Division/ Imperial County Department of Planning and Development Services.	
		MM. 4.4.2f Slabs-on-grade shall be designed using a modulus of subgrade reaction (k) of 225 pounds per cubic inch (pci) for the on- site soil and imported fill material based on the soil classification. The slab subgrade shall be prepared in accordance with procedures	

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LCC = Less than Cumulatively Considerable	CC = Cumulatively Considerable		

TABLE ES-1 SUMMARY OF IMPACTS

IMPACT	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF IMPACT/ SIGNIFICANCE AFTER MITIGATION
		outlined in the Geotechnical Evaluation Report (WTI 2016a). A minimum 4-inch layer of base course should be provided beneath all slabs to help prevent capillary rise and a damp slab. <i>Timing/Implementation: Prior to approval of final building plans/As part of project design.</i> <i>Enforcement/Monitoring: Imperial County Public</i> Works Department, Engineering Division/ Imperial County Department of Planning and Development Services. MM 4.4.2g All concrete placement and curing operations shall follow the American Concrete Institute manual recommendations. Improper curing techniques and/or high slump (high water- cement ratio) could cause excessive shrinkage, cracking or curling. Concrete slabs shall be allowed to cure adequately before placing vinyl or other moisture sensitive floor covering. <i>Timing/Implementation: Prior to approval of final building plans/During concrete placement and curing.</i> <i>Enforcement/Monitoring: Imperial County Public</i> Works Department, Engineering Division/ Imperial County Department of Planning and Development Services.	

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	IMPACT	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF IMPACT/ SIGNIFICANCE AFTER MITIGATION
			MM 4.4.2h In areas where sidewalks or paving do not immediately adjoin the structures of the proposed Phase 1 and Phase 2 of the Energy Storage System Project, protective slopes shall be provided with an outfall of 5 percent for at least 10 feet from perimeter walls. Backfill against footings, exterior walls, and in utility trenches shall be well-compacted and free of all construction debris to minimize the possibility of moisture infiltration. <i>Timing/Implementation: Prior</i> to approval of final building plans/During construction. Enforcement/Monitoring: Imperial County Public Works Department, Engineering Division/Imperial County Department of Planning and Development Services.	
S c c c c c c	Construction of the proposed Battery Energy storage System would result in ground listurbance and potential for erosion and loss of top soil. Multiple requirements have been established to address erosion during onstruction, operation and decommissioning of the proposed Project. Therefore, erosion mpacts are considered less than significant .	LTS	None required.	Not applicable.
LTS = Less than Significant LCC = Less than Cumulativ		I Ily Significant ively Considerable	SU = Significant and Unavoidable	NI = No Impact

TABLE ES-1 SUMMARY OF IMPACTS

	ІМРАСТ	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF IMPACT/ SIGNIFICANCI AFTER MITIGATION
Expansive Sa Impact 4.4.4	Soils on the Project site were tested to determine whether expansive characteristics were present. The soils had an expansion index value of zero and may be characterized as low expansive Therefore, expansive soils impacts associated with construction, operation and decommissioning of the Battery Energy Storage System are considered less than significant.	LTS	None required.	Not applicable.
Soil Corrosivi Impact 4.4.5	ity Soils within the Project site were tested for corrosivity. While the soils do not contain properties that would be corrosive to concrete, metal structures coming in contact with Project site soils could be damaged. This is considered a potentially significant impact .	PS	MM 4.4.5 A corrosion expert shall be part of the Project design team to prepare recommendations for corrosion protection of buried utilities and conduits. Buried metal piping or other conduits in contact with the native soils shall be protected from direct contact with the soil. Special protection shall be implemented where dissimilar metals are placed in close proximity or are joined. <i>Timing/Implementation: Prior to issuance of building permit/during construction.</i> <i>Enforcement/Monitoring: Imperial County Public</i> Works Department, Engineering Division/ Imperial County Department of Planning and Development Services.	LTS

TABLE ES-1

TABLE ES-1				
SUMMARY OF IMPACTS				

	IMPACT	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF IMPACT/ SIGNIFICANCE AFTER MITIGATION
	xposure to Geologic and Seismic Impacts Implementation of the proposed Project, in combination with past, present and probable large-scale solar projects in the vicinity of the Battery Energy Storage System, may result in cumulative exposure to geologic and seismic hazards. However, each project would be subject to compliance with the CBC, UBC, and geotechnical engineering recommendations to reduce impacts on a project-specific basis. Therefore, exposure to geologic and seismic impacts are considered a less than cumulatively considerable impact.	LCC	None required.	Not applicable.
HAZARDS AND	HAZARDOUS MATERIALS			
Accidental Re	Materials Transport, Use, Disposal and lease The proposed Project would involve the transport, use, and disposal of hazardous materials in association with construction, operation and decommissioning. However, all materials would be transported, used and disposed of in accordance with all applicable local, state and federal requirements. Therefore, impacts associated with accidental release during hazardous materials transport, use and disposal are considered less than significant.	LTS	None required.	Not applicable.
۲S = Less than Signific	ant PS = Potential	ly Significant	SU = Significant and Unavoidable	NI = No Impact

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SUMMARY OF IMPACTS				
IMPACT	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF IMPACT/ SIGNIFICANCE AFTER MITIGATION	
Hazard Through Upset/Release of Hazardous Materials Impact 4.5.2 The proposed Project site was historically farmed but is now part of the Campo Verde Solar Project. The Phase I ESA prepared for the Campo Verde Solar Project did not identify the use of pesticides as a Recognized Environmental Concern. The Project as proposed includes safety features to reduce potential for leaks and fires. Therefore, impacts through upset/release of hazardous materials are considered less than significant.	LTS	None required.	Not applicable.	
Cumulative Hazards and Hazardous Materials Impact Impact 4.5.3 The proposed Battery Energy Storage System, in combination with other Past, Present and Probable Large-Scale Projects in the vicinity of the Campo Verde Battery Energy Storage System, would not increase the density of development in the area because no other cumulative projects are within the cumulative geographic scope. Thus, the proposed Project's contribution to cumulative hazards and hazardous materials impacts is considered less than cumulatively considerable.	LCC	None required.	Not applicable.	

TABLE ES-1				
SUMMARY OF IMPACTS				

LTS = Less than Significant PS = Potentially Significant SU = Significant and Unavoidable NI = NO Imp LCC = Less than Cumulatively Considerable CC = Cumulatively Considerable	TS = Less than Significant CC = Less than Cumulatively Considerable	PS = Potentially Significant CC = Cumulatively Considerable	SU = Significant and Unavoidable	NI = No Impact
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TABLE ES-1 **SUMMARY OF IMPACTS**

IMPACT	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF IMPACT/ SIGNIFICANCE AFTER MITIGATION
NOISE			
Noise Levels in Excess of Standards/Substantial Temporary Noise Increase Impact 4.6.1 Heavy equipment and traffic generated during construction would generate short-term increases in noise on and in the vicinity of the Project site. However, based on the number of pieces of equipment and distance to the property line, as well as the low Phase 1 and Phase 2 construction traffic volumes, noise levels would not exceed County standards. Therefore, impacts associated with noise levels in excess of standards or a substantial temporary noise increase as a result of Phase 1 and Phase 2 Project construction are considered less than significant.	LTS	None required.	Not applicable.
S = Less than Significant PS = Potential C = Less than Cumulatively Considerable CC = Cumulat	l Ily Significant ively Considerable	SU = Significant and Unavoidable	NI = No Impact

TABLE ES-1 SUMMARY OF IMPACTS

IMPACT	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF IMPACT/ SIGNIFICANCE AFTER MITIGATION
Exposure to Excessive Groundborne Vibration or Groundborne Noise Impact 4.6.2Construction of the proposed Project would result in some groundborne vibration caused by heavy equipment. However, vibration levels would not exceed FTA thresholds and no residential structures are located in the vicinity of the Project to suffer damage or annoyance. Therefore, Project impacts associated with excessive groundborne vibration or groundborne noise are considered less than significant.	LTS	None required.	Not applicable.
Noise Levels in Excess of Standards/Substantial Permanent Noise Increase Impact 4.6.3 Operational noise would be generated by the HVAC units proposed as part of Phase 1 and Phase 2 of the Battery Energy Storage System. However, the noise levels generated would not exceed the County's Property Line Noise Limits. Therefore, the proposed Project would result in a less than significant impact with regard to noise levels in excess of standards or a substantial permanent noise level increase.	LTS	None required.	Not applicable.
IL IL .TS = Less than Significant PS = Potential .CC = Less than Cumulatively Considerable CC = Cumulatively	ly Significant ively Considerable	SU = Significant and Unavoidable	NI = No Impact

TABLE ES-1 SUMMARY OF IMPACTS

	IMPACT	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF IMPACT/ SIGNIFICANCE AFTER MITIGATION
	roject-Related Noise Impacts Construction of Phase 1 and Phase 2 of the Battery Energy Storage System would contribute construction traffic to area roadways. However, the increase in traffic noise would be less than cumulatively considerable. The Project would not generate any operational noise, traffic noise or groundborne vibration noise. Decommissioning noise impacts would be similar to those of Project construction. Therefore, cumulative Project- related noise impacts are considered less than cumulatively considerable.	LCC	None required.	Not applicable.
TRANSPORTATIO	ON AND CIRCULATION			
Impacts to Intersection and Roadway Segment LOS (Year 2016 Plus Project) Impact 4.7.1 Implementation of the proposed Project would add Phase 1 construction traffic to existing traffic volumes on the study area intersection and roadways. The one intersection and three roadway segments are currently operating at LOS A and would remain unchanged with the addition of Phase 1 construction trip generation. Therefore, impacts to LOS in Year 2016 are considered less than significant.		LTS	None required.	Not applicable.

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TABLE ES-T SUMMARY OF IMPACTS					
	ІМРАСТ	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF IMPACT/ SIGNIFICANCE AFTER MITIGATION	
2018 Conditi	tersection and Roadway Segment LOS (Year ons) Implementation of the proposed Project would add Phase 2 construction traffic to existing traffic volumes on the study area intersection and roadways. The one intersection and three roadway segments are currently operating at LOS A and would remain unchanged with the addition of Phase 2 construction trip generation. Therefore, impacts to LOS in Year 2018 are considered less than significant.	LTS	None required.	Not applicable.	
Incompatible	Hazards Due to a Design Feature or Uses No changes in the existing circulation network or access would occur as a result of implementation of the Battery Energy Storage System. Based on the Project's location in a rural portion of Imperial County with low traffic volumes, it is not considered an incompatible use with surrounding agricultural land. Therefore, no impact would occur in association with hazards due to a design feature or incompatible uses.	LTS	None required.	Not applicable.	

TABLE ES-1

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SUMMARY OF IMPACTS					
ΙΜΡΑCΤ	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF IMPACT/ SIGNIFICANCE AFTER MITIGATION		
Emergency Access Impact 4.7.4 One access to the Project site is available off of Liebert Road. This access also serves the Campo Verde Substation. The Imperial County Fire Department will require that all fire apparatus access roads are properly designed to accommodate emergency access. Therefore, impacts associated with emergency access are considered less than significant.	LTS	None required.	Not applicable.		
Cumulative Impacts to Intersection and Segment LOS (Existing Year 2016) Impact 4.7.5 The proposed Project's construction traffic in combination with Year 2016 volumes would add traffic to the study area intersection and three roadway segments during peak construction. The intersection and segments are currently operating at LOS A and would not decline below LOS C with the addition of cumulative traffic. This impact is considered less than cumulatively considerable.	LCC	None required.	Not applicable.		

TABLE ES-1

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	ІМРАСТ	LEVEL OF IMPACT/ SIGNIFICANCE BEFORE MITIGATION	MITIGATION MEASURES	LEVEL OF IMPACT/ SIGNIFICANC AFTER MITIGATION
(Near-Term Y	Impacts to Intersection and Segment LOS Year 2018) The proposed Project's construction traffic in combination with Year 2018 volumes would add traffic to the study area intersection and roadway segments during peak construction. The intersection and three roadway segments are currently operating at LOS A and will continue to do so with the addition of cumulative traffic. This impact is considered less than cumulatively considerable.	LCC	None required.	Not applicable.
Decommissio	mpacts to Intersection and Segment LOS oning Year 2038) The proposed Project's decommissioning traffic in combination with Year 2038 volumes would add traffic to the study area intersection and roadway segments during peak construction. The intersection and three roadway segments are currently operating at LOS A and would continue to do so with the addition Year 2038 plus decommissioning traffic. This impact is considered less than cumulatively considerable.	LCC	None required.	Not applicable.

TABLE ES-1

LCC = Less than Cumulatively Considerable

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County of Imperial October 2016 PS = Potentially Significant CC = Cumulatively Considerable SU = Significant and Unavoidable

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