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October 19, 2018

Greg Lamberg
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650 Bercut Drive, Suite A
Sacramento, CA 95811

SUBJECT: Stanton Energy Reliability Center (16-AFC-01C), WASTE-1, Soil Management Plan

Dear Mr. Lamberg,

In accordance with WASTE-1, the CPM has reviewed and approved the Soil Management Plan. If you have any questions or concerns, please contact John Heiser, Compliance Project Manager, at (916) 653-8236, or by fax to (916) 654-3882, or via e-mail at John.Heiser@energy.ca.gov.

Sincerely,

A handwritten signature in blue ink that reads "John Heiser".

John Heiser
Compliance Office Manager
Siting, Transmission, & Environmental Protection
Division

Soil Management Plan

Condition of Certification WASTE-1

For the

Stanton Energy Reliability Center

Stanton, California

16-AFC-01

October 2018

Stanton Energy Reliability Center, LLC

JACOBS®



**Stanton Energy Reliability Center
Stanton, California
16-AFC-01**

Condition of Certification WASTE-1

Document Title: Soil Management Plan
Revision: Document Version
Date: October 2018
Client Name: Stanton Energy Reliability Center, LLC
Project Manager: Doug Davy
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Acronyms and Abbreviations

APN	Assessor's Parcel Map
BMP	best management practice
CCR	California Code of Regulations
CEC	California Energy Commission
COC	Conditions of Certification
CPM	Compliance Project Manager
CTG	combustion turbine generator
ESA	Environmental Site Assessment
HSP	Health and Safety Plan
LORS	Laws, Ordinances, Regulations, and Standards
MW	Megawatts
PCB	polychlorinated biphenyls
PE	Professional Engineer
PG	Professional Geologist
PID	photoionization detector
PPE	personal protective equipment
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison Company
SERC	Stanton Energy Reliability Center
SMP	Soil Management Plan
SWPPP	Storm Water Pollution Prevention Plan
TPH	total petroleum hydrocarbons
VOC	volatile organic compounds

1. Introduction

Stanton Energy Reliability Center, LLC (Project Owner) has prepared this Soil Management Plan (SMP) for the Stanton Energy Reliability Center (SERC) project in the City of Stanton, Orange County, California. This SMP has been prepared and is in conformance with Conditions of Certification (COC) **WASTE-1** in the California Energy Commission's (CEC) SERC Presiding Member's Proposed Decision.

1.1 Project Description

The SERC will be constructed in the City of Stanton, Orange County, at 10711 Dale Avenue (Figure 1). The site is located in a district zoned Industrial General (City of Stanton IG zoning district). The site consists of two parcels: (1) Parcel 1 (eastern side of the drainage canal) is 1.764 acres in size (Assessor's Parcel Number [APN] 126-531-43), and (2) Parcel 2 (western side of the canal) is 2.214 acres in size (APNs 126-531-40 and 126-553-18), for a total project site acreage of 3.978 acres. The Stanton Storm Channel is on the eastern boundary of Parcel 2 and western boundary of Parcel 1 and separates the two parcels (Figure 2). Land uses surrounding the site include the City of Stanton's industrial area to the north and south, public/quasi-public utility areas to the east consisting of the SCE Barre Peaker power plant and Barre Substation, and high and medium-density residential uses to the southeast and northwest

The SERC will be a nominal 98-megawatt (MW) natural gas-fired Hybrid EGT[®] plant consisting of two GE Energy LM6000 PC natural gas-fired combustion turbine generators (CTGs) and related facilities, with integrated battery systems for hybrid operation, and synchronous condensing capabilities. SERC will use water provided by Golden State Water Company via water supply pipelines located in Dale Avenue and/or Pacific Street. This source will also provide water for fire protection and service water, potable outlets, and safety showers

The SERC will interconnect to the existing SCE Barre Substation via a 0.35-mile long underground generator tie-line. Natural gas pipeline connection will be via a new 12- or 16-inch diameter pipe that will extend 2.75 miles north along Dale Avenue to Southern California Gas Company's line 1014 in La Palma Avenue (Figures 1 and 2). Industrial water will be discharged to the City of Stanton sanitary sewer line in Pacific Street to the northwest of parcel 2.

Temporary construction facilities will include a 2.89-acre worker parking area at the Bethel Romanian Pentecostal Church, 350 feet south of the SERC site along Dale Avenue (Figure 2). The construction laydown area for the gas-fired power plant will be Parcel 2, site of the battery storage system. The battery storage system is to be constructed after construction of the gas turbine part of the facility on Parcel 1 is materially complete.

1.2 Project Schedule

Construction of the generating facility, from site preparation and grading to commissioning and the beginning of commercial operation, is expected to take place from early January of 2019 to the first quarter of 2020, lasting a total of approximately 14 months.

This SMP for the SERC project is being submitted to comply with COC, WASTE-1, as set forth in the CEC's Presiding Member's Proposed Decision for the SERC project, dated August 5, 2018.

The scope of this SMP is limited to activities involving the excavation, characterization, management, reuse, and/or disposal of soils at the SERC site. All other onsite activities that could generate wastes will

be managed in accordance with plans prepared by SERC and approved by the CEC Compliance Project Manager (CPM), as required by the CEC Presiding Member's Proposed Decision.

This plan covers the following as required by COC WASTE-1:

WASTE-1: The Project Owner shall prepare and submit to the CPM a Soils Management Plan prior to any earthwork. The SMP shall be prepared by a California-Registered Geologist or a California-Registered Civil Engineer with sufficient experience in hazardous waste management. The SMP shall be updated as needed to reflect changes in laws, regulations or site conditions. All earthwork at the site shall be conducted in accordance with the SMP. Where actions are required in accordance with the SMP, an SMP summary report, which includes all analytical data and other findings, must be submitted once the earthwork has been completed. Topics covered by the SMP shall include, but not be limited to:

- Land use history, including description and locations of any known contamination.
- The nature and extent of previous investigations and remediation at the site.
- The nature and extent of any unremediated areas at the proposed site.
- A listing and description of institutional controls, such as the county's excavation ordinance and other local, state, and federal regulations and laws that would apply to project.
- Names and positions of individuals involved with soils management and their specific role.
- An earthwork schedule.
- A description of protocols for the investigation and evaluation of any previously unidentified contamination that may be encountered in time. The protocol shall be for temporary and permanent controls that may be required to reduce exposure to on-site workers, visitors, and the public.
- A site-specific Health and Safety Plan (HSP) implemented by all contractors at the site. The HSP shall be prepared by a Certified Industrial Hygienist and would protect onsite workers by including engineering controls, personal protective equipment (PPE), monitoring, and security to prevent unauthorized entry and to reduce construction related hazards. The HSP shall address the possibility of encountering subsurface chemical contamination and include procedures to protect workers and the public.
- Hazardous waste determination and disposal procedures for known and previously unidentified contamination.
- Requirements for site-specific techniques at the site to minimize dust, manage stockpiles, run-on and run-off controls, waste disposal procedures, etc.
- Copies of relevant permits or closures from regulatory agencies.

Verification: At least 45 days prior to any earthwork, the project owner shall submit the SMP to the CPM for review and approval. A SMP summary shall be submitted to the CPM within 25 days of completion of any earthwork.

2. Background

This section provides a brief summary of land use history at the site and previous site investigations. Also provided in this section is a summary of the institutional controls applicable to the SERC site.

2.1 Site Land Use History

SERC consists of two parcels totaling approximately 4 acres and is located in a mixed commercial/light industrial and residential area within the City of Stanton, CA. The western portion of the site has operated as a trucking company and a wooden pallet storage company. The eastern portion of the site is vacant, unoccupied, and undeveloped except for a power pole.

A general description of the historical use of the site from the Phase I ESA (AEC, 2016a) from aerial photograph review is included below:

- 1953 – The site was mostly vacant and undeveloped land with some areas that had been graded for agricultural use.
- 1963 – Stanton Flood Control Channel crosses the site
- 1972 – Site is partially developed, with two structures present and a cleared parking area on the western portion of the site. Eastern portion is vacant and undeveloped.
- 1980 – Site appears to be mostly vacant, with undeveloped grading on the western portion. Previous structures not visible. Eastern portion appears to be used for agricultural purposes.
- 1994 – Western portion of site is partially developed with the current garage building and cleared truck parking. Eastern portion of site continues as agricultural with the addition of several greenhouses.
- 2003-2005 – Western portion of site is partially paved and used for truck storage with the current garage building and a mobile home present along with pallet storage. Eastern portion of site continues as agricultural with several large plots of trees and a single greenhouse.
- 2009-2012 – Western portion remains essentially as previously described. Eastern portion appears as vacant unoccupied and undeveloped.

2.2 Phase I and II Environmental Site Assessments

No known previous environmental site investigation has been conducted at the site prior to the Phase I and Phase II Environmental Site Assessments (ESA) completed in 2016. During preparation of the Phase I ESA, it was determined that an underground storage tank that was present at the site had been removed (at an unknown date) with residual petroleum hydrocarbon potentially remaining. In addition, several containers of used oil and other chemical products along with stained areas were observed during the Phase I ESA site reconnaissance on the western portion of the site. Because of the findings of the Phase I ESA, a Phase II ESA was conducted to evaluate the presence of residual contamination at the site.

Eight soil borings were drilled to 15 feet as part of the Phase II ESA in August 2016 at the western portion of the site to assess the presence of residual contamination. Soil samples were collected and analyzed from multiple depths for TPH (Method SW8015), VOCs (Method SW8260B), and metals (Methods 6010B/7471A). Soil vapor samples were also collected for VOC analysis.

The results of the sampling showed no significant staining and/or odors or registerable levels of VOCs on a photoionization detector (PID). Groundwater was not encountered. TPH as gasoline was not detected in any sample. TPH as diesel was detected in four of 16 samples up to a maximum concentration of 175 mg/kg. TPH as oil was detected in five of 16 samples up to a maximum concentration of 796 mg/kg. The limited detections of TPH at low concentrations were determined to be insignificant. VOCs in soil or soil vapor were not detected in any of the eight samples analyzed. Metals were not detected at elevated concentrations. The results of the Phase II ESA concluded that the TPH impacts to the site are not considered a significant constraint to future development and no additional assessment is warranted (AEC, 2016b).

2.3 Institutional Controls

The CEC retains sole jurisdiction for licensing and compliance of thermal power plants that exceed 50 MW of capacity (as is the case with SERC). The CEC CPM will be responsible for the final approval and implementation of the SMP. The SMP will comply with all applicable state and local laws, ordinances and standards (LORS) to ensure that excavation and/or grading activities of soil do not affect the public, construction workers or the environment. SERC will follow state and federal regulations to ensure that any waste is properly characterized and managed.

Other institutional controls that currently apply to this SMP include those found in California Code of Regulations (CCR), Title 22, Division 4.5. These regulations detail requirements for management of hazardous and potentially hazardous wastes, including requirements applicable to the generation, storage, transport, and treatment or disposal of wastes.

Construction activities will be performed in accordance with the requirements outlined in the CEC's license and COC, including CBO approval of grading and drainage plans pertaining to excavation and grading operations. The COC includes requirements for permitting, hazard management, erosion control, and inspections for excavation and grading activities. The onsite inspections shall be carried out by the CBO.

To the extent necessary, the SMP shall be updated to reflect changes in laws, regulations, or site conditions.

SERC's license contains the requirements for certain notifications in the event of a transfer of the SERC site to another entity, as well as requirements for ultimate closure of the site.

3. Roles and Responsibilities

This section addresses the roles and responsibilities for the management, implementation, and oversight of this SMP. Table 1 lists major project milestones.

Table 1. Project Schedule Major Milestones

Activity	Date
Mobilization	January 2, 2019
Delineate and mark the boundaries of the construction zone	Prior to construction
Implement perimeter erosion and sediment controls; protect interior and downgradient inlets, waterways, and sensitive areas	Prior to construction
Stabilize construction entrance/exit and roadway	Prior to construction
Establish parking and staging areas for vehicle and equipment storage, maintenance, and fueling	Prior to construction
Establish laydown and parking area for materials storage/staging	Prior to construction
Establish concrete washout area	Prior to construction
Completion of Construction	December 31, 2019

3.1 Owner

SERC's compliance manager will be responsible for ensuring that all soil wastes generated as part of construction activities at the project site comply with this SMP and applicable laws, ordinances, regulations, and standards. SERC LLC will be considered the generator of excavated soil for construction projects related to improvements or modifications to the existing facilities and related easements or rights-of-way associated with the SERC. As the generator, SERC LLC will be responsible for the management of soil materials generated from site-related construction projects including the characterization, accumulation, and ultimate disposition of the material.

This includes the determination of soils as hazardous or nonhazardous waste, monitoring of accumulation times and limits, maintaining records and documents in accordance with applicable federal and state recordkeeping requirements, and submittal of reports where required.

The SERC compliance manager will provide oversight of the construction contractor during the implementation of the procedures outlined in this SMP and will ensure that all required documentation is prepared and submitted according to specified schedules. The SERC compliance manager will also coordinate reviews of the required plans and reports by the CEC CPM.

3.2 Construction Contractor

On a project-specific basis, the construction contractor will be responsible for proper handling of excavated soil materials, in compliance with the procedures outlined in this SMP and all applicable federal, state, and local laws and regulations.

The construction contractor will also be responsible for preparing a site-specific Environmental Compliance Plan for construction projects consistent with the SMP. The Environmental Compliance Plan will be prepared by the contractor and will be designed to protect onsite workers by including engineering

controls, monitoring, and security to prevent unauthorized entry, and to reduce construction-related hazards. The Environmental Compliance Plan will address the possibility of encountering subsurface hazards including hazardous waste contamination and procedures to protect workers and the public.

The construction contractor will also designate an individual who will have responsibility for implementing project soil waste management activities, under the oversight of the SERC compliance manager.

This individual will provide day-to-day oversight of construction waste management including:

- Visual inspections of all waste storage areas
- Identification/classification of wastes generated
- Maintenance of storage areas
- Arranging for and coordinating the offsite transport of generated wastes
- Recordkeeping of inspections and waste transport/disposal/recycling activities

Construction activities are expected to commence in January 2019 and last approximately 12 months, with commissioning to take approximately 2 months after that.

4. Excavated Soil Management

This section addresses the onsite management and re-use or disposal of excavated soils.

4.1 Potentially Contaminated Soil

As indicated in Section 2, a soil investigation has been conducted at the site and it is not anticipated that contaminated soils will be encountered during construction. Once earthwork and construction activities commence, the following approach will be taken to address areas of unanticipated contamination beneath the surface soil. Field crews will be directed to stop work if they observe staining, unusual odors, or leaking containers during the excavation activities. Field personnel will be instructed to notify the construction superintendent, who will notify the California-licensed Professional Engineer (PE) or Professional Geologist (PG) designated to the project. The PE or PG will inspect and evaluate the potentially contaminated material and direct any collection of samples for analysis. If additional analytical laboratory analysis is warranted, it is anticipated that such samples will be analyzed for VOCs, TPH and metals for evaluating whether or not the soil can be reused on-site or if the soil would require off-Site disposal at a regulated landfill or recycling facility.

4.1.1 Health and Safety Plan

The hazards associated with contaminated soil management will be addressed in a project- and site-specific health and safety plan (HSP) developed by the Construction Contractor for the SERC project. Elements of the HSP specific to the management of soil encountered during this project will include toxicity information concerning potential contaminants, information concerning personal protective equipment, and respiratory protection that may be necessary to work safely around the soil. The HSP will also describe any worker medical monitoring that may be required.

During construction activities, the exposure of construction workers, site workers, visitors, and the public to potentially contaminated soil will be minimized by a series of control measures.

Equipment operators and laborers will be required to wear PPE, such as dust masks or air-purifying respirators, when necessary, and as designated by the HSP to avoid potential exposure. The required level of respiratory protection will be determined, based on the procedures outlined in the project HSP, and may include continuous air monitoring. The PPE requirements for given tasks and anticipated site conditions will be provided in the project HSP.

To protect site workers, visitors, and the public from potential exposure to site contaminants, access to these construction areas will be strictly controlled and only those with the proper authorization and training will be allowed to access the site. Where necessary, the creation of potential dust from excavation activities will be controlled through watering and/or silt fencing to avoid the creation of fugitive dust and other measures as outlined in the SERC Air Quality Construction Mitigation Plan. Additional control measures, as defined in the SERC Storm Water Pollution Prevention Plan (SWPPP) and provisions of this SMP will be used to minimize the effects of construction efforts on the surrounding environment.

4.1.2 SCAQMD Rule 1166 Monitoring

If excavation or grading of soils results in the unanticipated detection or suspicion of VOCs, the Contractor shall comply with SCAQMD Rule 1166, including making a Rule 1166 Notification to SCAQMD as soon as possible, and obtaining a permit, if needed, prior to resuming excavation or grading. All grading and excavation conducted at the site shall be conducted in accordance with SCAQMD Rule 1166

if VOCs emissions from site soil are found to be present at concentrations of 50 parts per million per volume or greater when screened using a PID calibrated to hexane. Such soil is considered to be “contaminated” as defined by SCAQMD Rule 1166. In the event that contaminated soil as defined by Rule 1166 is encountered, it is expected that the quantity will be limited in volume and that the management of the soil will be able to be completed under a Rule 1166 Various Locations Plan.

For any VOC-contaminated soils encountered during construction, the SCAQMD Rule 1166 Permit or Various Locations Plan will define requirements for soil handling, monitoring, storage, and disposal designed to minimize emissions of VOCs to the atmosphere. Specific requirements will include:

- Procedures and criteria to segregate impacted soil from non-impacted soil during excavation;
- Measures to monitor VOC emissions during excavations;
- Measures to control VOC emissions during excavation; and
- Measures to isolate temporary stockpiles of excavated soil and requirements for stockpile monitoring.

Excavated soils will be observed for visual stains and odors and will be segregated based on their appearance and organic vapor analyzer (OVA) readings. Soil containment, handling, and stockpiling will depend on field observations regarding the potential presence of VOCs with the requirements defined by the Rule 1166 Permit or Various Locations Plan.

4.2 Reuse of Soils on Site

Excess soils resulting from initial leveling and grading of the SERC site will be stockpiled for anticipated on-site reuse. Excavated and stockpiled soil will be reused onsite to the maximum extent possible. If suspect soils are encountered during the grading work (i.e. stained, odorous, etc.), sampling and analysis will be conducted to confirm that said soils meet a non-hazardous designation before on-site reuse of said soil is to occur. If any suspect soil is determined to be non-Resource Conservation and Recovery Act (RCRA) hazardous waste (i.e. California hazardous waste) or RCRA hazardous waste, such soil will not be permitted to be reused on-site and will require off-site disposal at an appropriate licensed landfill or recycling facility. The construction contractor will move the soils and create and stabilize these soil piles in accordance with all applicable BMPs.

Stockpiled contaminated soils, intended for offsite disposal, will be handled in accordance with Sections 4.3 and 4.4 of this SMP.

4.3 Soil Disposal

Any excess soils, which are not reused on-site, will be sampled and characterized as appropriate for disposal. There are four possible scenarios for ultimate disposition of the excavated soils not reused onsite. Analysis could indicate: (1) soils are not impacted and can be reused at off-site receiving locations requiring fill material (2) soils are impacted but are a non-hazardous waste and can be disposed of at Class II or III landfill or recycling facilities (3) soils are non-RCRA hazardous waste and require off-site disposal at an appropriate Class I landfill or recycling facility; or (4) soils are RCRA hazardous waste and require off-site disposal at an appropriate Class I landfill or recycling facility. The number of samples obtained of soil will be dependent on the quantity of excavated soil to be characterized, based on a rate of approximately one sample per 1,000 cubic yards of soil. In-situ characterization results may also be used in lieu of additional characterization, if determined to be representative of the excavated soil. Sample frequency will also depend on requirements of any off-site receiving facilities where applicable.

SERC LLC must approve all receiving locations for non-impacted soil and waste profiles for any non-hazardous or hazardous waste prior to soil being transported offsite. The Contractor must allow five business days for this approval.

4.4 Waste Disposal Sites

Nonhazardous soil waste, which is not reused onsite will be disposed of at Class II or III landfills or recycling facilities. Soils considered to be non-RCRA or RCRA hazardous waste will be disposed of at Class I disposal or recycling facilities. The construction contractor will be responsible for establishing contractual agreements with waste disposal and/or recycling companies, including any additional chemical constituent analysis that may be required by the landfill.

SERC requires prior notification of any disposal or recycling facility proposed. The Contractor must provide SERC a complete audit package for the proposed facility for review and approval. Only SERC's compliance manager or designee is authorized to sign outgoing waste manifests for non-hazardous and hazardous waste. Any non-impacted soil that is exported from the site will be tracked by conventional bills of lading.

SERC's compliance manager or designee will be responsible for signing all waste manifests. The Contractor must provide SERC a complete audit package for the proposed receiving locations/disposal facilities for review and approval. Only SERC's compliance manager or designee is authorized to sign outgoing waste manifests.

5. References

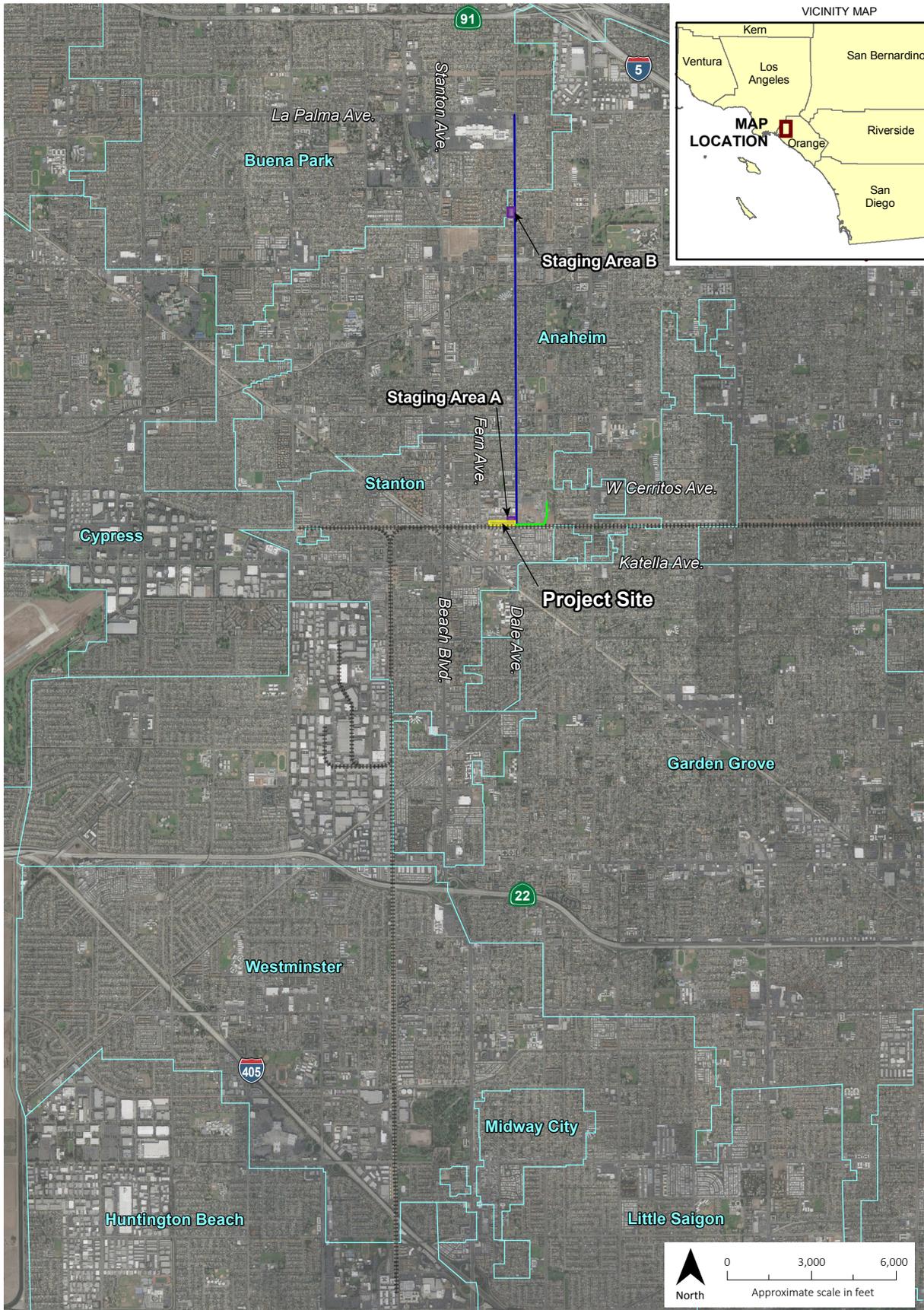
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Figures

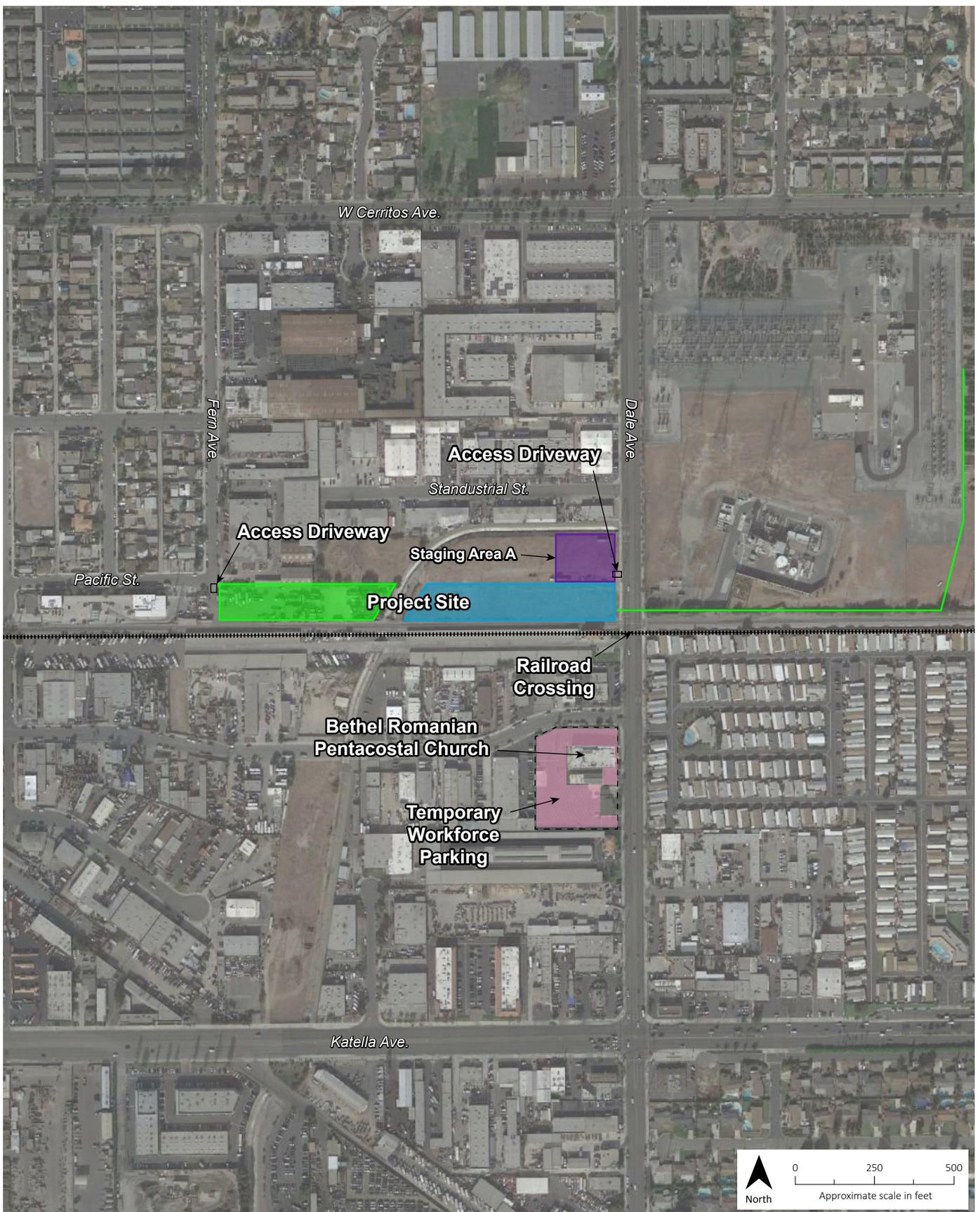


Aerial image source: Google™ Earth, 2018.

Figure 1
Project Location Map
 Stanton Energy Reliability Center
 Stanton, California

LEGEND

- City Limits
- Natural Gas Pipeline
- Generator Tie-Line
- Project Site
- Natural Gas Pipeline Staging Area



Aerial image source: Google™ Earth, 2018.

LEGEND

- Natural Gas Pipeline
- Generator Tie-Line
- █ Parcel 1
- █ Parcel 2
- █ Temporary Workforce Parking
- UPRR Union Pacific Railroad

Figure 2
Site Location Map

Stanton Energy Reliability Center
Stanton, California