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5.13 Visual Resources

Visual resources are the natural and cultural features of the environment that can be seen and that contribute to the public's enjoyment of the environment. Visual resource or aesthetic impacts are generally defined in terms of a project's physical characteristics and potential visibility, and the extent that the project's presence would change the visual character and quality of the environment in which it would be located.

This section was prepared following California Energy Commission (CEC) guidelines for preparing visual impact assessments for Applications for Certification (AFC). Section 5.13.1 documents the visual conditions that currently exist in the Alamitos Energy Center (AEC) area. Section 5.13.2 discusses the potential environmental effects as they relate to visual resources. Section 5.13.3 discusses the potential cumulative impacts of this and other projects in the area. Section 5.13.4 summarizes the mitigation measures proposed to reduce project impacts on visual resources. Section 5.13.5 describes the laws, ordinances, regulations, and standards (LORS) relevant to visual resources. Section 5.13.6 lists agencies involved and agency contacts, and Section 5.13.7 discusses permits. Section 5.13.8 lists the references used in preparation of this section.

Figures 5.13-1 and 5.13-2 show the location of the AEC site and the locations of the viewpoints referenced in this section. Three views that provide representative views looking toward the project site from sensitive viewing areas were selected as key observation points (KOP) that were used for preparation of simulations and analysis of project visual effects. The existing views and simulated views of the project from the viewpoints selected as KOPs appear in Figures 5.13-3 through 5.13-5. In addition, four existing condition character views, presented in Figures 5.13-6 through 5.13-9, are included to provide a further understanding of the project site's existing appearance and its relationship to its context. All figures are provided at the end of this section.

5.13.1 Affected Environment

5.13.1.1 Introduction

AES Southland Development, LLC (AES-SLD) proposes to construct, own, and operate the AEC—a natural-gas-fired, air-cooled, combined-cycle, electrical generating facility in Long Beach, Los Angeles County, California. The proposed AEC will have a net generating capacity of 1,936 megawatts (MW) and gross generating capacity of 1,995 MW.¹ The AEC will replace and be constructed on the site of the existing Alamitos Generating Station.

The AEC will consist of four 3-on-1 combined-cycle gas turbine power blocks with twelve natural-gas-fired combustion turbine generators (CTG), twelve heat recovery steam generators (HRSG), four steam turbine generators (STG), four air-cooled condensers, and related ancillary equipment. The AEC will use air-cooled condensers for cooling, completely eliminating the existing ocean water once-through-cooling system. The AEC will use potable water provided by the City of Long Beach Water Department (LBWD) for construction, operational process, and sanitary uses but at substantially lower volumes than the existing Alamitos Generating Station has historically used. This water will be supplied through existing onsite potable water lines.

The AEC will interconnect to the existing Southern California Edison (SCE) 230-kilovolt (kV) switchyard adjacent to the north side of the property. Natural gas will be supplied to the AEC via the existing offsite 30-inch-diameter pipeline owned and operated by Southern California Gas Company (SoCalGas) that currently serves the Alamitos Generating Station. Existing water treatment facilities, emergency services, and administration and maintenance buildings will be reused for the AEC. The AEC will require relocation of

¹ Referenced to site ambient average temperature conditions of 65.3 degrees Fahrenheit (°F) dry bulb and 62.7°F wet bulb temperature without evaporative cooler operation.

the natural gas metering facilities and construction of a new natural gas compressor building within the existing Alamitos Generating Station site footprint. Stormwater will be discharged to two retention basins and then ultimately to the San Gabriel River via existing stormwater outfalls.

The AEC will include a new 1,000-foot process/sanitary wastewater pipeline to the first point of interconnection with the existing LBWD sewer system and will eliminate the current practice of treatment and discharge of process/sanitary wastewater to the San Gabriel River. The project may also require upgrading approximately 4,000 feet of the existing offsite LBWD sewer line downstream of the first point of interconnection, therefore, this possible offsite improvement to the LBWD system is also analyzed in this AFC. The total length of the new pipeline (1,000 feet) and the upgraded pipeline (4,000 feet) is approximately 5,000 feet.

To provide fast-starting and stopping, flexible generating resources, the AEC will be configured and deployed as a multi-stage generating (MSG) facility. The MSG configuration will allow the AEC to generate power across a wide and flexible operating range. The AEC can serve both peak and intermediate loads with the added capabilities of rapid startup, significant turndown capability (ability to turn down to a low load), and fast ramp rates (30 percent per minute when operating above minimum gas turbine turndown capacity). As California's intermittent renewable energy portfolio continues to grow, operating in either load following or partial shutdown mode will become necessary to maintain electrical grid reliability, thus placing an increased importance upon the rapid startup, high turndown, steep ramp rate, and superior heat rate of the MSG configuration employed at the AEC.

By using proven combined-cycle technology, the AEC can also run as a baseload facility, if needed, providing greater reliability to meet resource adequacy needs for the southern California electrical system. As an in-basin generating asset, the AEC will provide local generating capacity, voltage support, and reactive power that are essential for transmission system reliability. The AEC will be able to provide system stability by providing reactive power, voltage support, frequency stability, and rotating mass in the heart of the critical Western Los Angeles local reliability area. By being in the load center, the AEC also helps to avoid potential transmission line overloads and can provide reliable local energy supplies when electricity from more distant generating resources is unavailable.

The AEC's combustion turbines and associated equipment will include the use of best available control technology to limit emissions of criteria pollutants and hazardous air pollutants. By being able to deliver flexible operating characteristics across a wide range of generating capacity, at a relatively consistent and superior heat rate, the AEC will help lower the overall greenhouse gas emissions resulting from electrical generation in southern California and allow for smoother integration of intermittent renewable resources.

Existing Alamitos Generating Station Units 1–6 are currently in operation. All six operating units and retired Unit 7 will be demolished as part of the proposed project. Construction and demolition activities at the project site are anticipated to last 139 months, from first quarter 2016 until third quarter 2027. The project will commence with the demolition of retired Unit 7 and other ancillary structures to make room for the construction of AEC Blocks 1 and 2. The demolition of Unit 7 will commence in the first quarter of 2016. The construction of Block 1 is scheduled to commence in the third quarter of 2016 and construction of Block 2 is scheduled to commence in the fourth quarter of 2016. The demolition of existing Units 5 and 6 will make space for the construction of AEC Block 3. AEC Block 3 construction is scheduled to commence in the first quarter of 2020 and will be completed in the second quarter of 2022. The demolition of existing Units 3 and 4 will make space for the construction of AEC Block 4. AEC Block 4 construction is scheduled to commence in the second quarter of 2023 and will be completed in the fourth quarter of 2025. The demolition of remaining existing units is scheduled to commence in the third quarter of 2025.

Construction of the AEC will require the use of onsite laydown areas (approximately 8 acres dispersed throughout the existing site) and an approximately 10-acre laydown area located adjacent to the existing site. The adjacent 10-acre laydown area will be shared with another project being developed by the Applicant (Huntington Beach Energy Project [HBEP] 12-AFC-02). Due to the timing for commencement of

construction for these two projects, the adjacent laydown area will already be in use for equipment storage before AEC construction begins.

5.13.1.2 Regional Setting

The project site is located in Long Beach, California, southeast of the intersection of State Route (SR) 22 (7th Street) and Studebaker Road. For purposes of this analysis, and to orient the viewer, Figure 5.13-1 shows the relationship between the proposed AEC footprint (including the proposed aboveground equipment and construction laydown, parking, and offsite wastewater line), in the context of an already developed landscape. The Alamitos Generating Station site has been generating power for approximately 60 years. Its structures have been a constant physical presence as the surrounding area has evolved into an area dominated by industry, but also encompassing a wide range of land uses, including residential developments, commercial clusters, transportation corridors, and a marina/harbor area.

The AEC site is bordered by the SCE 230-kV switchyard to the north, the San Gabriel River to the east, Plains West Coast Terminals Alamitos Tank Farm and undeveloped/vacant property to the south, and Studebaker Road to the west. Beyond the SCE switchyard is SR 22 (7th Street), which is bordered to the north by a single-family residential neighborhood. The San Gabriel River Bike Trail parallels both banks of the San Gabriel River, a large site on the east side of the river is occupied by the Los Angeles Department of Water and Power (LADWP) Haynes Generating Station. East of the LADWP generating facility is the senior residential community known as Leisure World, which lies on the Seal Beach side of the Long Beach/Seal Beach municipal boundary. Immediately west and northwest of Studebaker Road is the Los Cerritos Channel and associated inlets. West of the channel is an area with a mix of single-family residences within the neighborhoods of University Park Estates and Bixby Hill, open space/recreation areas, educational institutions and commercial development beyond. A formal entrance to the AEC is located off of Studebaker Road, between Loynes Drive and 7th Street. See Section 5.6.2, Land Use for further details on existing land uses.

The area immediately surrounding the AEC site consists of flat, sea-level topography characterized visually by a moderately high level of urban mixed uses (industrial, commercial and residential) and pockets of maritime uses (San Gabriel River, Los Cerritos Channel, marina and open areas including wetland and marina-oriented commercial businesses) south-southwest of the project site.

There are no officially designated state scenic highways near the project. The Pacific Coast Highway (PCH; Highway 1), located approximately 0.7 mile west at its closest point, is listed as an eligible state scenic highway (Caltrans, 2013).

The project site is within a coastal plan area that has specific requirements related to visual resources that are applicable to the AEC because the southern half of site is located within the coastal zone; the City of Long Beach Local Coastal Program (LCP), implemented pursuant to the California Coastal Act, is applicable to the AEC. Policies and requirements related to visual resources in the LCP, including the City of Long Beach South East Area Development and Improvement Plan (SEADIP) Specific Plan are discussed in detail in Section 5.13.5.2.

The project site, including the offsite wastewater pipeline, are designated L (Mixed Use) within the City of Long Beach General Plan. As mentioned previously, the AEC is located within the specific planned development known as SEADIP of the General Plan and LCP. Specifically, within the SEADIP the AEC is located within Subarea 19, which is designated for industrial use. Because the CEC has authority to permit power plants, the CEC licensing process supersedes all state and local laws including all local ordinances such as land use plans and specific code requirements, including those for aesthetics. Nevertheless, as proposed, the AEC will conform to the visual standards and requirements because the project will be implemented on lands already designated, zoned and used for industrial uses. All applicable policies and the project's consistency with these policies are discussed in Section 5.13.5.

5.13.1.3 Project Site

The AEC aboveground equipment (CTGs, air-cooled condenser, etc.) will be located within the approximately 63-acre site of the currently operating Alamitos Generating Station, portions of which will be demolished. Both the construction of the AEC and removal of existing Alamitos Generating Station features are analyzed in this section.

At present, the existing Alamitos Generating Station contains seven units with six prominent stacks and scaffold-covered structures. The existing stacks are all over 200 feet tall, have a whitewashed appearance, and are unsystematically arranged. Four stacks are tightly oriented while two stacks appear visually separated in the landscape, creating an element of visual discord. The existing boilers range from 121 to 155 feet in height. The bulk of the existing Alamitos Generating Station aboveground structures are located along the northern and eastern edges of the site.

In contrast, the AEC's stacks will be 120 feet tall. Instead of boilers, the AEC will have HRSGs, which will be 92 feet high. The AEC's air-cooled condenser will be 104 feet high. The proposed AEC aboveground features will have placement that is consistent with that of the existing project footprint, with the majority of structures situated on the eastern edge. A total of nine stacks and eleven transformers associated with AEC Blocks 1, 2, and 3 will be sited in such a way that parallels the San Gabriel River. The remaining three stacks and four transformers associated with Block 4 will be located on the northern boundary.

Structures on the properties immediately adjacent to the project site include the existing SCE switchyard infrastructure to the north and petroleum storage tanks associated with Plains West Coast Terminals Alamitos Tank Farm to the south.

Four new single-circuit overhead transmission lines will be installed onsite to connect the step-up transformers to the existing SCE 230-kV switchyard. See AFC Sections 2.0 and 3.0 for additional information on the project's interconnection to the electrical grid and transmission of electricity generated. All other linear appurtenances (natural gas and potable water), with the exception of the proposed offsite process/wastewater pipeline, will connect to infrastructure already associated with the project.

5.13.1.4 Construction Laydown Area

Temporary construction facilities will include approximately 8 acres of land within the fence line of the project site, which have been allocated for laydown, storage and parking. Designated laydown areas will be located north and southwest of the proposed Block 4 which are situated on the northern and western portions of the site. One additional temporary laydown area will be located on the adjacent property to the south and encompass approximately 10 acres.

5.13.1.5 Sensitive Viewing Areas and Key Observation Points

To structure the analysis of the AEC's effects on visual resources, the project's viewshed was determined. The viewshed is the area surrounding a project from which the project is, or could be, visible to viewers based on topography, vegetation, and the built environment. The AEC viewshed analysis was conducted using geographic information system (GIS) software to generate an understanding of the proposed project's visibility in the area that extends up to 3 miles from the project site. The analysis took into account the maximum heights of the proposed AEC structures (120-foot stack height) and surrounding topography to identify locations where the AEC facilities would theoretically be visible via an unobstructed or partial line-of-sight. This analysis considers the extent to which topography would block views of AEC facilities, but does not take into account the potential screening effects of existing buildings and vegetation. Results of the viewshed analysis are presented in Figure 5.13-2, which indicates the areas within 3 miles of the project site in which the AEC facilities would have the potential to be visible, as well as areas where facilities would not have the potential to be visible. Utilizing the viewshed analysis, areas within the viewshed that would be the

most sensitive to the project's potential visual impacts and the sensitive receptors in those areas were identified prior to the site visit.²

Based on field work conducted from February 2012 through August 2013 by CH2M HILL staff, the existing visual conditions were photo-documented from potentially sensitive receptor locations located throughout the study area. CH2M HILL reviewed the views from the inventory of viewpoints captured within the study area and selected three views as KOPs to be used for evaluating AEC visual effects. The three KOPs chosen for this analysis were selected in consultation with CEC staff and represent the best viewing conditions from major areas of viewer sensitivity including Channel View Park / Long Beach Bikeway Route 10, University Park Estates, and Marine Stadium Park.

Figures 5.13-1 and 5.13-2 indicate the location of each viewpoint relative to the project site and the relationships between the existing and proposed aboveground facilities. Figure 5.13-1 is presented on an aerial base map at 1:12,000 and shows project components and the KOP and character view locations. Figure 5.13-2 identifies the project viewshed, KOP locations, character views, streets, and roads. Figures 5.13-3 through 5.13-5 represent the existing view from each KOP for the AEC and a simulation of what the view would look like with the project in place. Figures 5.13-6 through 5.13-9 represent character views that provide a regional understanding of the relationship of the project site to its context. All figures are provided at the end of this section.

Based on the observations made in the field and review of photographs, CH2M HILL staff documented and evaluated the existing visual conditions of the views from each of the three KOPs. Assessments of existing visual conditions were made based on application of the approach to landscape evaluation that is a part of the methodology for visual impact assessment developed by the Federal Highway Administration (FHWA, 1988) that is described in Section 5.13.2.1. The baseline existing conditions seen in the views from each of the three KOPs are described below.

5.13.1.5.1 KOP 1—View from Channel View Park / Long Beach Bikeway Route 10

Figure 5.13-3 depicts the view from KOP 1, which is located within Channel View Park along Long Beach Bikeway Route 10, west of Los Cerritos Channel and Studebaker Road, which is immediately west of the project site. KOP 1 is located approximately 0.18 mile away to the northwest from the Alamitos Generating Station entrance. The view from KOP 1 represents a recreationalist view within and traveling through Channel View Park along Long Beach Bikeway Route 10, a designated Class I (off-road) bike path. This viewpoint also approximates the view from within the adjacent single-family residential development, University Park Estates, as well as Kettering Elementary School immediately adjacent to the west of the park.

The visual quality of the view from KOP 1 is moderately low. Despite the view's greenbelt and coastal inlet visual character, as evidenced by the channelized water and palm trees, the backdrop consists entirely of an industrial landscape with the prominent existing Alamitos Generating Station power plant. The existing stacks and scaffolding-covered boiler are the most vivid features in the center of the view, with all four Alamitos Generating Station stacks skylined above the treetops and utility infrastructure. Los Cerritos Channel in the foreground of the view is subordinate to the backdrop of the existing Alamitos Generating Station plant beyond.

Visibility of the project site is moderately high; transmission poles and vegetation in the immediate foreground partially obscure what would otherwise be an unimpeded line of sight toward the AEC. Studebaker Road, visible in the foreground view, is a prominent local road and is a main arterial providing access to portions of both SR 22 and SR 405. KOP 1 is situated in the southeastern portion of Long Beach just west of the city of Seal Beach and southwest of the unincorporated community of Rossmoor. Overall, visual

² Typically, residents and recreationists are considered to be sensitive receptors to changes in the landscape. This is because of the potential for effects to their long-term views or their enjoyment of a particular landscape or activity.

sensitivity from KOP 1 is moderately high. This is based on the moderately high visibility of the AEC site, with a moderately high degree of exposure, in an area where viewer concern is assumed to be high. This view provides one of the closest and least unobstructed views of the project site from a sensitive viewing area. Viewer concern is high because it represents views from a park, a bike trail, and the adjacent single-family residential neighborhood and Kettering Elementary School.

5.13.1.5.2 KOP 2—View from University Park Estates

Figure 5.13-8 depicts the view from KOP 2, which is located within the single-family residential neighborhood of University Park Estates, within 0.2 mile of the western edge of the project site. This viewpoint was selected to represent the view from the closest residential development. The view of KOP 1 at Silvera Street, looking east down Eliot Street, provides prominent views of the existing Alamitos Generating Station power plant above rooftops in the immediate center foreground.

The visual quality of the view from KOP 2 is moderately low. The view from KOP 2 provides a snapshot of an established residential community with 1960s architecture which is offset by the prominence of the existing Alamitos Generating Station and less-prominent transmission structures visible beyond. The existing Alamitos Generating Station stacks and the boiler with exposed scaffolding tower over the rooftops of residences, constitute discordant industrial elements in this residential view. The human-made features of the electricity generation and residential development appear as inconsistent in form and color, resulting in a view that possesses a moderately low degree of overall unity.

Visibility of the Alamitos Generating Station from this location is high, despite the obscured views from some locations, intervening vegetation, and a neighborhood sound wall partially blocking the street-level view toward the project site. Several eastern-facing residences within the neighborhood, primarily situated along the west side of Silvera Avenue, are oriented in such a way that the Alamitos Generating Station is partially or somewhat visible from the street level with minimal intervening infrastructure and vegetation. The number of viewers is moderately high given the number of residences within this area, and duration of views would be high, resulting in a generally high degree of viewer exposure.

This view is sensitive in that KOP 2 is within a residential neighborhood in which the existing power plant is visible above the rooftops and dominates the view. This high degree of exposure, in conjunction with the assumed high degree of viewer concern and moderately low visual quality, results in a high degree of viewer sensitivity in the view from a residential area toward the project site.

5.13.1.5.3 KOP 3—View from Marine Stadium Park

Figure 5.13-4a depicts the view from KOP 3, which is located in Alamitos Bay at the easternmost edge of Marine Stadium Park near the intersection of East Appian Way and Bay Shore Avenue in Long Beach, approximately 1.2 mile southwest of the project site. This viewpoint represents the view from an area of heavily used recreational waterways and a shoreline recreational area. Though recreationists can enjoy various marine activities, Marine Stadium is most notably known for being a location for water skiing and rowing. This viewpoint also approximates the view from the northeastern edges of the adjacent Belmont and Naples neighborhoods. The specific viewpoint looks down the Los Cerritos Channel at the convergence of where the inlet empties into Alamitos Bay and which provides relatively open views toward the existing Alamitos Generating Station. Thus, the view from KOP 3 toward the project site is seen by recreationists and residents looking northeast toward the project site.

The visual quality of the view from KOP 3 is moderately low. The bay views, as evidenced by the channelized waterway, boats, and docks along the waterway are the most vivid features in the view. The existing Alamitos Generating Station stacks and associated scaffolding-covered boilers as well as the adjacent LADWP power plant stacks visible across the horizon of the view create a sense of prominence and overall bulk of the power plant facilities. The human-made features of both power plant facilities are recognizable as regionally unique structures in the area, although this heavy industrial infrastructure creates discordant forms with the existing maritime elements in terms of form and size.

Visibility of the project site from KOP 3 is moderate. The ground-level area would not be visible from this location, screened by intervening vegetation and structures, and obscured by distance. The number of viewers would be moderately high, given the use of this space as a promenade and occasional event space. Duration of views toward the project site would be high, though it should be noted that the more popular views from this location are likely to be the unobstructed ones with the focus on special boating events taking place in the immediate foreground view. Viewer exposure would therefore be moderately high from KOP 3. The AEC site would be partially visible from this location, though the ground level would likely be partially obscured by intervening structures in the foreground and middleground. Because this view represents the view from within Alamitos Bay, the number of viewers at this location is assumed to be moderately high. Duration of view is similarly assumed to be high, taking into account the residences, hotels, restaurants, and recreational facilities in the bay area, and low speed limits on roads and in the inlet waterways. Given the moderate visibility of the AEC site, the moderately high number of viewers and high duration of views, viewer exposure is moderately high for KOP 3.

Given the moderately low visual quality in this view, high viewer concern, and high viewer exposure, visual sensitivity for KOP 3 is moderately high. A relatively large number of viewers would have somewhat sustained views toward the project site from this area, although these views are screened to a substantial degree by intervening elements of the built environment.

5.13.1.6 Character Views

In response to a request from CEC staff, four additional views (Character View 1 through Character View 4), were prepared to provide a better understanding of the existing features on the project site and the role they play in views from the surrounding area. The locations of these views are indicated in Figures 5.13-1 and 5.13-2, and photographs of the existing views from these locations are presented in Figures 5.13-6 through 5.13-9. No simulations for these character views were requested, and therefore these views are not evaluated in the assessment of visual effects presented in Sections 5.13.2.4.1 through 5.13.2.4.3. Brief characterizations of the views from these areas are provided below.

5.13.1.6.1 Character View 1—View from Leisure World

Figure 5.13-6 depicts a view from Character View 1, a high-density retirement community located due east of the project across the Los Angeles River beyond the existing LADWP generating facility. This view is located approximately 0.3 mile from the closest point from the eastern edge of the project site. The view from Character View 1 was selected to represent a worst-case street-level view from within the gated senior community as well as approximate views from the western portion of the city of Seal Beach directly east of the project site. The existing Alamitos Generating Station facilities are secondary elements in the view that do not dominate the scene. Rather, the stacks and power blocks at the LADWP Haynes Generating Station, which are immediately adjacent to Leisure World to the west, are the dominating elements in the view, while the Alamitos Generating Station stacks are smaller and more distant elements. The project site would appear across almost the entire view though the potential visual effects associated with the AEC features would be limited because they will be considerably shorter and less bulky than the Alamitos Generating Station stacks and boilers that are now on the site.

5.13.1.6.2 Character View 2—View from Westminster Boulevard

Figure 5.13-7 depicts a view from Character View 2, a view from 2nd Street (also known as Westminster Boulevard), located across the street from the access road to the LADWP Haynes Generating Station. This view is located approximately 0.3 mile from the closest point from the southeastern edge of the project site. This view is one that is now completely dominated by large-scale infrastructure, including existing Alamitos Generating Station boilers and stacks, stacks associated with the LADWP generating station, large electric transmission structures, and the channelized San Gabriel River. At the far left edge of the photograph, the view encompasses a corner of the vacant lot immediately south of the project site and adjacent to the San Gabriel River that will be used as a construction laydown area. Behind this viewpoint, on the south side of

Westminster Boulevard, is a small gated residential development known as Island Village. This residential development, which lies on the Long Beach side of the Long Beach/Seal Beach border line, consists of a mixture of approximately 200 one- and two-story residences. Views from this residential development toward the power plant complexes on the north side of Westminster Boulevard/2nd Street are limited by the fact that Island Village is located approximately 15 feet below the elevation of the road, it is surrounded by walls and dense landscaping, and the development is dense and inward-oriented. With development of the proposed project, this view will be improved because the AEC elements will be considerably shorter, less bulky, and less cluttered appearing than those that are now present on the site.

5.13.1.6.3 Character View 3—View from PCH Bridge over Los Cerritos Channel

Figure 5.13-8 depicts an elevated and unobstructed view of the project from Character View 3, which looks northeast from the PCH (Highway 1) Bridge over Los Cerritos Channel. This view is located approximately 0.75 mile west-southwest from the closest point from the western edge of the project site. The view from Character View 3 represents a motorist's view from a main thoroughfare as well as a recreationalists' view within the waterway. The Los Cerritos Channel provides boaters' access to Los Alamitos Bay, which flows directly into the Pacific Ocean. The existing Alamitos Generating Station units combined with the LADWP units are co-dominant features in the landscape, spanning across the entire view. This view provides regional context as an area developed with mixed uses; however, the heavy presence of energy generation dominates the backdrop of the view.

5.13.1.6.4 Character View 4—View from Bixby Hill

Figure 5.13-9 depicts a view toward the project from North Hill Drive near Sherri Lane within Bixby Hill, a gated single-family residential development. The view from Character View 4 is located at a higher elevation approximately 0.6 mile northwest of the project site. This view was selected to represent a worst-case view from within the gated residential community, specifically approximating views from second-story residences with potential views oriented toward the project site. It is estimated that approximately 20 residences located along the southern perimeter of the neighborhood adjacent to 7th Street would likely have a worst-case view of the project site from any second-story views oriented toward the project. In this view, the tips of a few existing LADWP stacks are visible, though they are less dominant than the portions of the Alamitos Generating Station stacks visible above and through the treeline in the center of the view. The existing Alamitos Generating Station facilities are secondary elements of the scene. The relative visual dominance of these features is reduced by the presence of residential structures and vegetation framed in the foreground view. With the substantially reduced heights of the proposed AEC exhaust stacks and power blocks, the AEC facilities will be less visible (if visible at all) in this view than the stacks that can now be seen, leading to an improvement in visual quality rather than an adverse visual impact.

5.13.2 Environmental Analysis

5.13.2.1 Analysis Procedure

This analysis of the visual resource issues associated with the AEC, was prepared in accordance with the visual impact assessment system developed by the FHWA in *Visual Impact Assessment for Highway Projects* (FHWA, 1988). The FHWA invested considerable resources in developing and implementing of this method. As a result, it is robust and widely used to provide systematic evaluations of visual change.

The FHWA method addresses the following primary questions:

- What are the visual qualities and characteristics of the existing landscape in the project area?
- What are the potential effects of the project's proposed alternatives on the area's visual quality and aesthetics?
- Who would see the project, and what is their likely level of concern about or reaction to the way the project visually fits within the existing landscape?

Applying the FHWA method entails the following six steps:

1. Establish the project's area of visual influence.
2. Determine who has views of and from the project ("viewer").
3. Describe and assess the landscape that exists before project construction ("affected environment").
4. Assess the response of viewers looking at and from the project, before and after project construction ("viewer sensitivity or concern").
5. Determine and evaluate views of the project for before and after project construction (simulations).
6. Describe the potential visible changes to the project area and its surroundings that would result from the project.

The initial step in the evaluation process was the review of planning documents applicable to the project area to gain insight into the type of land uses intended for the general area, and the guidelines given for the protection or preservation of visual resources. Consideration was then given to the existing visual setting within the project viewshed, which is defined as the geographical area in which the project can be seen. As described in Section 5.13.2.1, a GIS analysis was conducted to identify the areas within 3 miles of the project site in which the project would have the potential to be visible. Site reconnaissance was conducted to view the site and surrounding area, identify potential KOPs, and take representative photographs of existing visual conditions. The photographs were taken with a 30-millimeter (mm) fixed-lens digital camera. Photographs from the site reconnaissance were selected to represent the "before" conditions from each of the potential KOPs. Within the viewshed area, three KOPs were selected to be used as the basis for analysis of the project's visual effects. The existing visual conditions seen in the views from each of the KOPs were evaluated using the FHWA visual quality assessment system that entails use of a numerical rating system.

The FHWA visual quality assessment asks: Is this particular view common or dramatic? Is it a pleasing composition (a mix of elements that seem to belong together) or not (a mix of elements that either do not belong together or contrast with the other elements in the surroundings)? Under the FHWA visual quality analysis system, the visual quality of each view is evaluated in terms of its vividness, intactness, and unity:

- Vividness is defined as the degree of drama, memorability, or distinctiveness of the landscape components. Overall vividness is an aggregated assessment of landform, vegetation, water features, and human-made components in views.
- Intactness is a measure of the visual integrity of the natural and human-built landscape and its freedom from encroaching elements. This factor can be present in well-kept urban and rural landscapes, as well as in natural settings. High intactness means that the landscape is free of unattractive features and is not broken up by features and elements that appear out of place. Low intactness means that visual elements that are unattractive and/or detract from the quality of the view can be seen.
- Unity is the degree of visual coherence and compositional harmony of the landscape considered as a whole. High unity frequently attests to the careful design of individual components and their relationship in the landscape or refers to an undisturbed natural landscape.

Each of these dimensions of visual quality is documented using an FHWA rating sheet, and for each of these dimensions, a numerical rating score on a scale from 1 to 7 is assigned, where a score of 1 indicates very low visual quality, a score of 4 indicates moderate or average visual quality, and a score of 7 indicates very high visual quality. The scores for each of these three dimensions are added and then averaged to generate an overall visual quality score.

The views from each of the three viewpoints selected as KOPs for this analysis are described and the results of the FHWA-based evaluation of their visual quality are documented in Sections 5.13.1.5.1 through 5.13.1.5.3.

To provide a basis for evaluating the project's impacts on these views, visual simulations were produced to illustrate the "after" visual conditions from each of the KOPs. Computer modeling and rendering techniques were used to produce the simulated images of the views of the site as they would appear after development of the project. Existing topographic and site data provided the basis for developing an initial digital model. The project engineers provided site plans and digital data for the proposed generation facility, and site plans and elevations for the components of the AEC transmission interconnection to the existing SCE 230-kV switchyard. These data were used to create three-dimensional (3-D) digital models of these facilities. These models were combined with the digital site model to produce a complete computer model of the generating facility and transmission system. These simulation images represent the project's appearance after demolition of existing structures and completion of construction of the AEC. These simulations provide the viewer with a clear image of the location, scale, and visual appearance of the proposed project. The images are accurate within the constraints of the available site and project data. The final "hardcopy" visual simulation images that appear in this AFC document were produced from the digital image files using a color printer. The "before" site photographs are included for each KOP in Figures 5.13-7 through 5.13-9 along with the "after" visual simulations.

Based on review of the simulated with-project views from each KOP, the visual quality of each view was re-evaluated using the FHWA visual quality evaluative system. The results of the evaluations of the existing and with project views from each KOP are documented on the FHWA worksheets that are attached as Appendix 5.13A. The evaluations of the existing and with-project views were compared to determine the degree of visual change. Based on the assessment of the degree of visual change that the development of the project would bring about and an evaluation of the sensitivity of the view, overall determinations of visual impact were made and were expressed in terms of the impact level (very low to very high).

Once all effects were examined, a determination was made as to whether any potential impacts would reach a level that would be significant under the four California Environmental Quality Act (CEQA) Guidelines checklist questions discussed in Section 5.13.2.2.

5.13.2.2 Impact Evaluation Criteria

The following criteria from the CEQA Guidelines were considered in determining whether a visual impact would be significant.

The CEQA Guidelines define a "significant effect" on the environment to mean a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including objects of historic or aesthetic significance" (14 CCR 15382).

Appendix G of the CEQA Guidelines, under Aesthetics, lists the following four questions to be addressed regarding whether the potential impacts of a project are significant:

1. Would the project have a substantial adverse effect on a scenic vista?
2. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway?
3. Would the project substantially degrade the existing visual character or quality of the site and its surroundings?
4. Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

5.13.2.3 Project Appearance

As described more fully in Section 2.0, Project Description, the AEC is a natural-gas-fired, combined-cycle, air-cooled electrical generating facility that will replace and be constructed on the site of the existing Alamitos Generating Station. The project will consist of four, 3-on-1, combined-cycle gas turbine power blocks with twelve natural-gas-fired CTGs, twelve HRSGs, four STGs, four air-cooled condensers, and related

ancillary equipment. Existing water treatment facilities, emergency services, and administration and maintenance buildings will be reused for the AEC. The project will be constructed entirely within the existing approximately 63-acre Alamitos Generating Station site and will include stacks, turbines, and control buildings as well as approximately 8 acres of onsite temporary construction laydown and parking, and an approximately 10-acre offsite laydown area adjacent to the project site. For the purposes of this analysis, and to orient the viewer, Figure 5.13-1 shows the relationship between the proposed AEC equipment within the footprint of the existing Alamitos Generating Station in the larger landscape in which it would be located. Portions of the existing Alamitos Generating Station will be demolished as part of the project. Offsite linear development consists solely of a new 1,000-foot wastewater pipeline as part of the project.

5.13.2.3.1 Project Structures and Dimensions

The AEC facilities are described in detail in Section 2.0, Project Description. Figure 2.1-2 shows the general arrangement and layout of the proposed project features on the site, and Figures 2.1-3a through 2.1-3d provide typical elevation views. Table 5.13-1 summarizes the dimensions, finishes, and materials of the generating facility's major features. The exteriors of major project equipment will be treated with a neutral gray or tan finish to optimize its visual integration with the surrounding environment. As it currently exists, the project will be surrounded by a chain-link security fence.

TABLE 5.13-1

Approximate Dimensions and Colors, Materials, and Finishes of the Major Project Features

Feature	Length (feet)	Width (feet)	Height (feet)	Diameter (feet)	Color	Materials	Finish
Combustion Gas Turbine (CGT) and Generator	100	32	34	—	Gray	Steel	Flat / Untextured
CGT Generator Enclosure	39	16	34	—	Gray	Mild Steel Plate	Flat / Untextured
CGT Enclosure	61	32	25	—	Gray	Steel	Flat / Untextured
CGT /HRSG Transition Duct	14	32	31	—	Gray	Mild Steel Plate	Flat / Untextured
Fuel Gas Skid	20	12	20	—	Gray	Structural Steel Shape	Flat / Untextured
CGT Control/Lube Oil Skid	50	14.5	20	—	Gray	Flat Mild Steel Plate	Flat / Untextured
STG Step-up Transformer	35	23	15	—	Gray	Custom Steel Shape	Flat / Untextured
Turbine Cooling Air Skid	31	12	21	—	Gray	Structural Steel Shape	Flat / Untextured
CGT Step Up Transformer	35	23	15	—	Gray	Custom Steel Shape	Flat / Untextured
CO ₂ Fire Fighting (LP Tank)	15	20	15	—	Stark White	Pressure Vessel	Flat / Untextured
STG Enclosure	76	35	51	—	Gray	Mild Steel Plate	Flat / Untextured
Heat Recovery Steam Generator (HRSG)	77	44	92	—	Gray	A-36 Steel Plate	Flat / Untextured
HRSG Stacks	—	—	120	18	Gray	A-36 Steel Plate	Flat / Untextured
CGT Air Intake System	40	17	38	—	Gray	Mild Steel Plate	Flat / Untextured
Control/Electrical Package	40	20	15	—	Gray	Mild Steel Plate	Flat / Untextured
Existing Water Tank	—	6	44	38	Gray	A-36 Steel	Flat / Untextured

TABLE 5.13-1

Approximate Dimensions and Colors, Materials, and Finishes of the Major Project Features

Feature	Length (feet)	Width (feet)	Height (feet)	Diameter (feet)	Color	Materials	Finish
SFC Transformer	11	8	10	—	Gray	Custom Steel Shape	Flat / Untextured
SEC Transformer	11	8	10	—	Gray	Custom Steel Shape	Flat / Untextured
Unit Transformer	9	11	9	—	Gray	Custom Steel Shape	Flat / Untextured
Generator Main Circuit Breaker	10	12	24	—	Gray	Mild Steel Plate	Flat / Untextured
Fuel Gas Compressor/Conditioning	288	75	25	—	Gray	Ribbed Sheet Steel	Flat / Untextured
Boiler Feed Pump Enclosure	30	30	15	—	Gray	Ribbed Sheet Steel	Flat / Untextured
CEMS	15	15	10	—	Gray	Ribbed Sheet Steel	Flat / Untextured
BOP Fin Fan Cooler	86	48	15	—	Gray	A-36 Steel shapes	Flat / Untextured
Water Tank	—	—	30	30	Gray	A-36 Steel	Flat / Untextured
STG Control/Lube Oil Skid	27	12	10	—	Gray	Mild Steel Plate	Flat / Untextured
Existing Car Port	180	38	10	—	Gray	A-36 Steel Shapes	Flat / Untextured
Existing Service Water Tank	—	—	40	48	Gray	A-36 Steel	Flat / Untextured
Existing Fire Water Pump Skid	30	11	—	—	Gray	Mild Steel Plate	Flat/untextured
Relocated Gas Metering Station	166	73	—	—	Yellow	Steel Pipe and Support	Flat / Untextured
Air-Cooled Condenser	209	127	104	—	Gray	A-36 Steel Shapes	Flat / Untextured
Existing Control/Water Treatment Building	167	153	24	—	Tan	Ribbed Sheet Steel	Flat / Untextured
Existing Maintenance/Warehouse Building	211	104	16	—	Tan	Ribbed Sheet Steel	Flat / Untextured
Existing Schoolhouse	89	60	13	—	Tan	Ribbed Sheet Steel	Flat / Untextured
Ammonia Tank and Containment	36	38	14	—	Stark White	A-106 Pressure Vessel	Flat / Untextured
Ammonia Unloading	56	12	—	—	—	—	—
Transformer Wall	53	42	30	—	Untinted	Concrete	Flat/Untextured
Existing Administrative Building	204	126	18	—	Tan	—	Flat / Untextured
Reshaped North Retention Basin	197	170	—	—	N/A	N/A	N/A
Reshaped South Retention Basin	224	197	—	—	N/A	N/A	N/A

TABLE 5.13-1

Approximate Dimensions and Colors, Materials, and Finishes of the Major Project Features

Feature	Length (feet)	Width (feet)	Height (feet)	Diameter (feet)	Color	Materials	Finish
Sound Wall	—	—	55	—	Gray		Flat / Untextured

5.13.2.3.2 Transmission Interconnection

A new, single-circuit, onsite 230-kV transmission interconnection will connect the AEC power blocks to the existing SCE 230-kV switchyard adjacent to the north. No new offsite transmission connections are required. The effects of any visible features related to this interconnection are discussed below as applicable in the analysis of the visual effects resulting from the project as a whole. For additional information on the transmission lines, see Section 3.0, Transmission System Engineering.

5.13.2.3.3 Construction/Demolition Laydown Area

Temporary construction facilities will include approximately 8 acres of land within the fence line of the 63-acre project site, which have been allocated for laydown, storage and parking and 10 acres of laydown area adjacent to the site (see Figure 2.1-1). The major generating equipment including steam turbines, generators, boilers, and duct work will be removed, while the water treatment building, maintenance/warehouse building, administration building, water tanks, car port, fire water pump, and metering station will remain intact. Designated laydown areas will be located north and southwest of the proposed Block 4, and include an existing warehouse, which are situated on the northern and western portions of the site. Construction-related vehicle traffic will access the project from Studebaker Road. As detailed in Section 2.2, construction and demolition activities at the project site are anticipated to last 139 months, from the first quarter of 2016 until the third quarter of 2027. The first activities to occur on site in 2016 will be the dismantling of Alamitos Generating Station Unit 7 (first quarter) and construction of AEC Blocks 1 (third quarter) and 2 (fourth quarter). Construction of Blocks 1 and 2 are anticipated to span 33 months from third quarter 2016 to second quarter of 2019. The demolition of Alamitos Generating Station Units 5 and 6 is anticipated in 2018 (fourth quarter), which will make space for the construction of AEC Block 3, which is scheduled to commence in 2020 (first quarter) through 2022 (third quarter). Construction of Block 4 will occur in 2023 (second quarter) through 2025 (fourth quarter) and replace Alamitos Generating Station Units 3 and 4, which will be demolished in 2022 (first quarter). The demolition of the remaining Alamitos Generating Station units (Units 1 and 2) is scheduled to commence in 2025 (third quarter) through 2027 (third quarter). During project development, construction materials and large equipment (turbines, generators, transformers, and HRSG modules), trucks, and parked vehicles could be visible on the site, although views toward these areas from outside of the project site are mostly screened by intervening vegetation and perimeter fencing. After construction and demolition are complete, all debris would be removed from these laydown areas.

5.13.2.3.4 Landscaping

The existing Alamitos Generating Station is currently screened by a chain-link security fence around the entire site, with a security entrance located along Studebaker Road. Long stretches of linear fencing are apparent fronting Studebaker Road as well as the eastern perimeter of the site located along the San Gabriel River. Fencing is also located on the project's northern boundary, adjacent to the SCE switchyard, and southern boundary adjacent to the Plains West Coast Terminals Alamitos Tank Farm and undeveloped/vacant land. Zones of dense plantings lie along the western perimeter, near the security entrance, along Studebaker Road. In addition, dense screening plantings are located on the northern side of the SCE switchyard, which obscure views to the site. To the east of and outside of the existing Alamitos Generating Station is the San Gabriel River Bike Trail, which is situated atop a low-lying vegetated berm.

Views toward the AEC site from the northeast, east, and southeast are partially limited because of the project's location at an elevation below the berm. Because the project site is already screened and landscaped, no additional screening walls or landscaping is being proposed.

5.13.2.3.5 Lighting

The power plant may be operational (although not necessarily generating power) 24 hours per day, 7 days per week and would require night lighting for safety and security. The lighting system will provide illumination for operation under normal conditions, for safety under emergency conditions, and for manual operations during a power outage. The system will also provide 120-volt convenience outlets for portable lamps and tools.

To reduce offsite lighting impacts, lighting for the AEC will be restricted to areas required for safety and operation. Exterior lights will be hooded and directed onsite to minimize light or glare. Low-pressure sodium lamps and fixtures of a non-glare type will be specified. In addition, switched lighting circuits will be provided for areas where lighting is not required for normal operation or safety to allow these areas to remain dark at most times and to minimize the amount of lighting potentially visible offsite.

Construction will typically take place between the hours of 7 a.m. and 7 p.m., Monday through Friday, and 9 a.m. to 7 p.m. on Saturdays. Additional hours may be necessary to make up schedule deficiencies or to complete critical construction activities (for example, pouring concrete at night during hot weather, working around time-critical shutdowns and constraints). During the commissioning and startup phase of each power block, the typical work hours will remain the same; however, some activities may continue 24 hours per day, 7 days per week.

At times when onsite construction occurs during hours of darkness, lighting will be used on an as-needed basis to illuminate the areas where the construction is taking place. This lighting will be the minimum required to meet operational and safety requirements and will be shielded and directed at the areas, pointing toward the center of the site, where it is required to eliminate offsite light spill and illumination of the night sky.

5.13.2.4 Assessment of Visual Effects

As previously noted, the systematic evaluation of visual effects from the proposed project was conducted using FHWA worksheets, which are attached as Appendix 5.13A and provide fuller details regarding the comparison between existing and simulated views as summarized below. Figures 5.13-3 through 5.13-5 include the existing view from the viewpoint (referred to in Section 5.13.1.5) and a simulation of the same view during the project's operational period, with components of the existing Alamitos Generating Station facility removed.

5.13.2.4.1 KOP 1—View from Channel View Park/Long Beach Bikeway Route 10

Figure 5.13-3a presents the existing view toward the Alamitos Generating Station from Channel View Park/Long Beach Bikeway Route 10 and Figure 5.13-3b presents a simulation of the same view as it will appear during the AEC's operational period. As shown in the simulated view of the AEC, an assemblage of Alamitos Generating Station structures, tanks, and stacks located across the foreground of the view will be removed. The new AEC stacks will be significantly lower than the existing Alamitos Generating Station stacks. The existing Alamitos Generating Station HRSG units that are removed will be replaced by smaller, sleeker units that are mostly hidden behind the vegetative screening along the perimeter of the project site. The reduced scale and height of power plant structures greatly decrease the amount of industrial-appearing development in the view. The rest of the proposed facility would remain obstructed by the existing intervening vegetation and infrastructure. The AEC will not be the dominant feature and would disrupt only a nominal portion of the skyline, although the AEC stacks and HRSG units will be visible features in the view from this location. Overall, the proposed project will result in a positive change in the visual quality from KOP 1.

This assessment is supported by the analysis documented on the FHWA worksheet, which indicates an incremental increase in visual quality. The composition of the view of the AEC will be more harmonious than the existing view. With removal of the Alamitos Generating Station features, and with the proposed AEC features in the view, the skyline is more open, and there is a linear line of development similar to that of the existing tree line in the foreground view. Because of the project's low degree of contrast and the reduction in dominance, the project will result in a positive visual change in views from KOP 1.

5.13.2.4.2 KOP 2—View from University Park Estates

Figure 5.13-4a presents a photograph of the existing view toward the Alamitos Generating Station from the single-family residential development of University Park Estates at Silvera Street, looking east down Eliot Street and Figure 5.13-4b presents a simulation of the same view as it will appear during the AEC's operational period. When the AEC is constructed, the tall Alamitos Generating Station stacks and boiler will disappear from the view. The AEC air-cooled condensers, HRSG units, and stacks will be much shorter than those they will replace, and will be mostly hidden behind the residential structures and vegetation in the foreground of the view. To the extent that they are visible, they will create a solid line of developed features that would appear through breaks in the tree line and will be no taller than the highest portion of the tree line.

As indicated in the FHWA worksheet, there will be a moderate improvement in the overall visual quality of this view. The removal of the Alamitos Generating Station units will eliminate the tall stacks and scaffold-covered structures, which are currently the most visually discordant elements in the backdrop of the view. The new AEC stacks and HRSG units will appear lower than the trees and in line with the rooftops, creating a skyline that will appear more intact than in the existing view. Despite the new blocky air-cooled condenser and HRSG forms eliminating pockets where the sky is now visible in the left and center portion view above the roofline, this design increases the view's level of visual intactness. The lower heights and more uniform proportions of the power plant components contribute to a linear pattern consistent with the roofline of residences in the immediate foreground creating a significant degree of visual cohesion resulting in a moderate level of visual unity.

Overall, the project will result in a positive visual change to the view from KOP 2.

5.13.2.4.3 KOP 3—View from Marine Stadium Park

Figure 5.13-5a presents a photograph of the existing view toward the project site from Marine Stadium Park and Figure 5.13-5b shows a simulation of the view as it will appear during the AEC's operational period. As shown in the simulation, an assemblage of structures and stacks of the existing Alamitos Generating Station located across the far-middleground view will be removed. These existing Alamitos Generating Station elements will be replaced with AEC elements that appear smaller in scale than the existing Alamitos Generating Station features.

The AEC features will be co-dominant human-made features with the many other objects in the relatively open view across Alamitos Bay up Los Cerritos Channel, and will contribute to the visual mosaic of features varying in type, scale, color and form. The six tall existing stacks will be replaced by twelve smaller stacks oriented in a linear pattern across the center portion of the view. The impact of the new ACC forms combined with the stacks filling in small areas that now appear as open sky will slightly reduce the level of visual intactness in the view. The AEC will be in the backdrop of the view from this park and residential area, silhouetted against the sky. The analysis completed using the FHWA worksheet indicates that overall, with the project in place, the visual quality of the view will remain relatively the same. With the proposed project, the view from KOP 3 will be more unified and intensified by creating a horizontal pattern across the middleground that reinforces the visual cohesion of the view. In contrast to the view of the existing Alamitos Generating Station, the industrial presence of the AEC will have a lower and more streamlined profile in the landscape that is consistent with the scale of the landscape's other elements. This positive effect will be counterbalanced by a slight decrease in the intactness of the view created by the introduction of the new structures and stacks in the now-open area seen at the far end of the Los Cerritos Channel.

5.13.2.4.4 Light and Glare

The project site is located within a completely urbanized area in which street lighting and other infrastructure, including the light and glare produced from the existing Alamitos Generating Station and the adjacent LADWP plant, create substantial levels of light in the nighttime landscape. The project's effects on visual conditions in this area during hours of darkness would be positive. With replacement of the Alamitos Generating Station with the AEC, the overall amount of lighting on the project site will be substantially reduced. Because they are over 200 feet tall, all of the existing Alamitos Generating Station stacks are equipped with red flashing aviation safety lights. The exposed stairways and scaffolding on the exteriors of the tall boiler structures are illuminated with bright, unshielded bulbs. The stacks for the plant will be 120 feet tall, and the Federal Aviation Administration (FAA) Notice Criteria Tool has identified that additional evaluation is needed by the FAA to determine if lighting or marking will be needed for the stacks. Results from the FAA Notice Criteria Tool can be found in Appendix 3B. The HRSG and air-cooled condenser structures will be considerably lower than the existing boiler structures, and because their sides will be completely enclosed, without external scaffolding and stairways, there will be little to no need for external lighting. For the most part, external lighting will be restricted to the platforms on the tops of the HRSG structures. Furthermore, to the extent to which lighting is required on or around the project structures, it will, unlike the lighting on the 1950s- and 1960s-era facilities it is replacing, conform to contemporary Dark Skies standards. Consequently, the lighting on the new facilities will be restricted to areas where it is required for safety and operation, exterior lights will be hooded, and lights will be directed onsite to minimize glare and light spill off of the site or into the sky.

Low-pressure sodium lamps and fixtures of a non-glare type will be specified. In addition, switched lighting circuits will be provided for areas where lighting is not required for normal operation or safety to allow these areas to remain dark at most times and to minimize the amount of lighting potentially visible offsite. The lighting associated with the AEC will represent a substantial decrease in the lighting used on the existing Alamitos Generating Station site. Therefore, the degree of nighttime lighting on elevated structures that would be visible from the surrounding community or which could spill into the sky would be decreased. As a consequence, during the operational period, the project will have a positive impact in terms of effects on light and glare. For the most part, project construction is being planned to occur during daylight hours. To the extent that conditions arise that require construction to occur at night, lighting will be required to meet operational and worker safety requirements. When lighting is needed to support nighttime construction activities, to the extent feasible and consistent with worker safety codes, it will be restricted to the minimum required and will be directed toward the center of the construction site and shielded to prevent light from straying offsite. Task-specific construction lighting would be used to the extent practical while complying with worker safety regulations. Despite these measures, there may be limited times during the construction period when the project site may appear as a brightly lit area seen in the midst of a now brightly lit area of concentrated electric generation facilities.

5.13.2.4.5 Water Vapor Plumes

Visible plumes from power plants (and other sources) form when the mass of water in an exhaust plume exceeds the saturation point of the exhaust gases. The saturation point of air is directly related to its temperature with warm air having a higher saturation point (being able to carry more water in a vapor state) than cold air. When the saturation point is reached, water will condense out of vapor state to a liquid state, forming fine water droplets. These water droplets are visible in an exhaust plume.

Based on previous experience with the kinds of systems that will be installed at the AEC, formation of visible plumes from the project will be an unlikely occurrence related to unusual combination of near freezing temperatures and damp conditions and that, if present, the plumes would be relatively small.

Rather than using a conventional wet cooling tower that can create large steam plumes, the AEC will be cooled by air-cooled condensers, which do not create visible plumes. Although no significant water vapor plumes are expected to be created by the air-cooled condensers, there is potential that the HRSG stacks

could create small visible plumes when the AEC is operating during times of low temperature and high humidity. Given these conditions, the most likely times for plume formation would be cold nights. Given that plume formation occurs mostly during times of low temperature and high humidity, it is unlikely that they would form during times of clear weather because daylight hours during spring, summer, and fall months when weather is fair tend to have relatively high temperatures and low humidity.

5.13.2.5 Impact Significance

A discussion regarding whether the visual effects of the project would be significant pursuant to CEQA is provided below. The assessment of these impacts applies the criteria set forth in Appendix G of the CEQA Guidelines. The CEQA Guidelines define a “significant effect” on the environment to mean a “substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including objects of historic or aesthetic significance.” (14 CCR 15382)

Factors used to evaluate the significance of project-related visual impacts are set forth in Appendix G of CEQA. Appendix G is a screening tool, not a method for setting thresholds of significance. Appendix G is typically used in the Initial Study phase of the CEQA process, asking a series of questions. The purpose of these questions is to determine whether a project requires an Environmental Impact Report, a Mitigated Negative Declaration, or a Negative Declaration. As the Governor’s Office of Planning and Research stated, “Appendix G of the Guidelines lists a variety of potentially significant effects, but does not provide a means of judging whether they are indeed significant in a given set of circumstances.” The answers to the Appendix G questions are not determinative of whether an impact is significant or less than significant. Nevertheless, the questions presented in CEQA Appendix G are instructive.

In terms of project-related aesthetic impacts from construction and operations of the plant, Appendix G, asks, in part, whether the project:

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

No. There are no designated scenic vista points in the vicinity of the project.

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

No. Because the project site is not located within the boundaries of an adopted state scenic highway, and furthermore does not contain scenic resources, including trees, rock outcroppings, and historic buildings, the proposed project will not substantially damage scenic resources and, therefore, impacts will be less than significant.

- **Would the project substantially degrade the existing visual character or quality of the site and its surroundings?**

No. The proposed project will not substantially degrade the existing visual character of the project site and its surroundings. In fact, the proposed project will improved the visual quality of the site and its surroundings, as shown in the KOP analysis above. At present, the project site and some adjacent areas have a visual character that is dominated by large-scale electric generation and transmission facilities that include the Alamos Generating Station, a large Southern California substation and associated transmission lines, and the LADWP Haynes Generating Station and associated transmission lines. With the project, the visual character of views in the project vicinity will be improved because the AEC structures will be shorter and less dominant than the Alamos Generating Station structures they will replace.

- **Would the project create a new source of substantial light and glare that would adversely affect day or nighttime views in the area?**

No. As described in Section 5.13.2.4.7, with replacement of the existing Alamos Generating Station with the AEC, the amount of lighting on the project site will be substantially reduced, and the new

lighting fixtures will conform to contemporary standards geared to minimizing offsite light impacts and the potential for the lighting to have an adverse effect on night skies. As a result, the amount of lighting visible on the site from the surrounding area will be less than it is now, the project would have less of an effect on ambient lighting conditions in the project vicinity, and it would have less of an effect on the brightness of the night skies in the project area.

Because none of the major project features will have surfaces that are highly reflective, the project will not be a source of daytime glare.

Any lighting that will be installed to facilitate nighttime construction activities will, to the extent feasible and consistent with worker safety codes, be directed toward the center of the construction site and shielded to prevent light from straying offsite. Task-specific construction lighting will be used to the extent practical while complying with worker safety regulations.

5.13.3 Cumulative Effects

A cumulative impact refers to a proposed project's incremental effect together with other closely related past, present, and reasonably foreseeable future projects whose impacts may compound or increase the incremental effect of the proposed project (Public Resources Code Section 21083; 14 California Code of Regulations [CCR] Sections 15064(h), 15065(c), 15130, and 15355).

The AEC will not contribute to adverse impacts of other projects. As described in Section 5.6.4, Land Use Cumulative Effects, two projects are currently in the entitlement process with the City of Long Beach. The 2nd & PCH project is an approximately 11-acre mixed-use development consisting of retail, residential, hotel, restaurant, entertainment and associated parking. The proposed development would be located at the southwest corner of PCH and 2nd Street, approximately 0.75 mile southwest from the AEC. The applicant has completed Conceptual Site Plan Review, applied for full Site Plan Review and the Final Environmental Impact Report was released March 2011. Though the Planning Commission approved the plans, Long Beach City Council rejected the plan.

The Lyon Communities project is a vacant 7.01 acre lot currently used for temporary and seasonal businesses including a pumpkin patch and Christmas tree lot. Proposed development at this site includes two restaurant buildings, a bank, a hotel, and associated parking. Located at southeast corner of PCH and Studebaker Road, the site is approximately 0.7 mile south-southwest of the AEC. The project is currently in the Conceptual Site Plan Review stage.

The project may contribute to temporary visual impacts associated with construction. This could add cumulatively with other projects that are to be constructed over the same time period. However, cumulative construction-related impacts are not expected because a temporal overlap with the construction periods of the projects listed is considered unlikely.

The AEC will replace and be constructed within the industrial site boundaries of the existing Alamitos Generating Station within the surrounding industrial landscape. The incremental effect of the project will be to decrease the height and dominance of an existing power plant facility in the vicinity, increasing the visual quality, and thereby adding cumulatively to other projects that increase visual quality of the area. Therefore, the AEC is not expected to have any cumulatively considerable visual effects in conjunction with any of the projects described above. Therefore, no cumulative impacts are expected.

5.13.4 Mitigation Measures

This analysis has documented that the AEC will not substantially change the existing visual character and quality of the project as viewed from any of the KOPs. Furthermore, there would be no substantial adverse effects on any scenic vistas, scenic resources within a state scenic highway, and would not create a new source of substantial light and glare that would adversely affect day or nighttime views in the area. In fact, proposed activities would slightly increase the overall visual quality. Because there will be no significant adverse visual impacts, no mitigation measures are required.

5.13.5 Laws, Ordinances, Regulations, and Standards

This subsection describes the LORS relevant to the visual resource issues associated with the AEC. The AEC site is within the city limits of Long Beach and within the coastal zone. Visual resource and urban design concerns applicable to the project are also addressed in the City of Long Beach General Plan, Southeast Area Development and Improvement Plan, and the City of Long Beach Municipal Code. No federal or regional LORS are known that would apply to the project's visual resource issues. Applicable state and local LORS are described below.

5.13.5.1 State LORS

The California Coastal Act and California Scenic Highway Program are state LORS that typically apply to power plant projects in coastal locations.

5.13.5.1.1 California Coastal Act

The project is located within the City of Long Beach's coastal zone and is subject to the California Coastal Act. Section 30251 of the California Coastal Act requires that "permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas." As described in Section 5.13.2.4, the project would result in a positive visual change in the surrounding area. In compliance with the requirements of the Coastal Act, the City of Long Beach prepared an LCP.

As discussed in detail in Section 5.6, Land Use, the LCP was adopted by the Long Beach City Council on February 12, 1980, and certified by the California Coastal Commission (CCC) on July 22, 1980, and now implements the Coastal Act, including Section 30251 through the LCP. The CCC subsequently certified conditions and amendments to the LCP through January 1994. AEC consistency with the California Coastal Act is addressed in the discussion of its consistency with the LCP, which is discussed in greater detail in Section 5.13.5.2.2.

5.13.5.1.2 California Scenic Highway Program

The California Scenic Highway Program protects and enhances the natural scenic beauty of California highways and adjacent corridors through special conservation treatment (Caltrans, 2008). A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. The status of a proposed state scenic highway changes from eligible to "officially designated" when the local governing body applies to Caltrans for scenic highway approval, adopts a Corridor Protection Program, and receives notification that the highway has been officially designated a Scenic Highway. At present, there are no officially designated state scenic highways near the project. The PCH (Highway 1), which is listed as an eligible state scenic highway (Caltrans, 2013), passes through Long Beach in the area south and west of the project site and, at its closest point, passes within 0.7 mile of the site. At the point at which the PCH crosses the Alamitos Channel, the project site is visible in the view up the channel, at about 0.75 mile in the distance. This view is Character View 3, and a photograph of the existing view from this location can be seen in Figure 5.13.8. This existing view from the PCH is one in which energy generation facilities dominate the view. Because Long Beach has not adopted a Corridor Protection Program for the segment of the PCH in this area of Long Beach and this segment has not been officially designated as a State Scenic Highway, it does not qualify for any special consideration that State Scenic Highway designation might confer.

5.13.5.2 Local LORS

Table 5.13-2 lists the applicable state and local LORS that are pertinent to the project and visual resources. In addition to the state plans described previously, the specific provisions of each plan or ordinance that have potential relevance to the project are the City of Long Beach General Plan, Southeast Area

Development and Improvement Plan (SEADIP), and City of Long Beach Municipal Code Zoning Ordinance, and which are discussed in Sections 5.13.5.2.1, 5.13.5.2.2, and 5.13.5.2.3, respectively.

TABLE 5.13-2

Laws, Ordinances, Regulations, and Standards for Visual Resources

LORS	Requirements/Applicability	Administering Agency	AFC Section Explaining Conformance
California Coastal Act	Section 30251 of the California Coastal Act addresses the protection and, where feasible, enhancement of visual resources and visual quality when permitting a proposed development in the coastal zone. The CCC certified the amended LCP in 1994. With this certification, the LCP, implements the Coastal Act, including Section 30251.	City of Long Beach Development Services	Section 5.13.5.1.1
California Scenic Highway Program	Protects and enhances the natural scenic beauty of California highways and adjacent corridors through special conservation treatment.	California Department of Transportation	Section 5.13.5.1.2
City of Long Beach General Plan	Comprehensive long-range plan to serve as the guide for the physical development of the City of Long Beach.	City of Long Beach Development Services	Section 5.13.5.2.1
City of Long Beach Southeast Area Development and Improvement Plan Specific Plan	Specific plan to guide development within the SEADIP subarea within the LCP.	City of Long Beach Development Services	Section 5.13.5.2.2
City of Long Beach Municipal Code Zoning Ordinance, Title 21	Establishes zoning districts governing land use and the placement of buildings and district improvements.	City of Long Beach Development Services	Section 5.13.5.2.3

5.13.5.2.1 City of Long Beach General Plan

The AEC site is located within the city limits of Long Beach and is, therefore, subject to the provisions of the City of Long Beach General Plan. The project site and the route of the offsite wastewater pipeline are designated No. 7 (Mixed Use) in the General Plan and LCP. Policies pertaining to visual resources that are applicable to the project are summarized and evaluated in Table 5.13-3.

TABLE 5.13-3

Conformity with the City of Long Beach General Plan

Provision	Conformity?
Open Space and Recreation Element	
Policy 1.2 Protect and improve the community's natural resources, amenities and scenic values including nature centers, beaches, bluffs, wetlands and water bodies.	Yes. Replacement of the existing Alamitos Generating Station with the AEC would reduce the presence of a generating facility in views from the surrounding areas, as discussed in Section 5.13.2.4. The amount of nighttime lighting on the site would be reduced and lighting design would ensure exterior lights within the project site are shielded and downward-facing, minimizing the potential for light spill outside of the project site and into nearby recreation and open spaces.

TABLE 5.13-3

Conformity with the City of Long Beach General Plan

Provision	Conformity?
Air Quality Element	
Policy 6.1 Further reduce particulate emissions from roads, parking lots, construction site, unpaved alleys, and port operations and related uses.	Yes. Construction activities associated with the replacement of the existing Alamitos Generating Station with the AEC would ensure proper measures to control dust over the period of construction as discussed in Section 5.1, Air Quality.
Land Use Element	
Urban Design Analysis	Yes. The existing Alamitos Generating Station has landscaping in place that complies with the requirements for setbacks, screening and vegetation. The AEC would not affect landscaping that is already in place. Therefore, the AEC will be consistent with these policies.
Conclusions and Policy Directions	
Certain City entrances at arterial and freeways should be beautified to enhance the City’s image. Of particular importance are the entrances at Seventh Street and Studebaker Road, and all the entrances from the Long Beach Freeway.	
Conservation Element	
Overall Goals of the City No.2	Yes. The AEC will comply with applicable conservation goals set forth in the General Plan, and as required by state regulations. AEC has been designed to comply with all setback and buffer requirements. The AEC will replace and be constructed within the industrial site boundaries of the existing power plant and will improve visual quality as discussed in Section 5.13.2.4.
To create and maintain a productive harmony between man and his environment through conservation of natural resources and protection of significant areas having environment and aesthetic value.	
Goals for Other Resources No. 1	
To identify and preserve sites of outstanding scenic, historic, and cultural significant or recreational potential.	
Local Coastal Program	
The LCP adopted the SEADIP Specific Plan by reference. Specific development and use standards are provided within the SEADIP Specific Plan. The SEADIP’s development and use standards that have relevance for visual resources issues and the project’s conformance with them are identified in Table 5.13-4.	Yes. The project is consistent with the provisions and specific development and use standards within the SEADIP (see Table 5.13-4 below).

Source: City of Long Beach, 1980, 1989, 1996, 2002 (Reprinted 2005)

5.13.5.2.2 South East Area Development and Improvement Plan (SEADIP) Specific Plan

The AEC is located within the SEADIP area defined in the LCP. Prior to implementation of the LCP, the SEADIP was adopted as a Specific Plan in 1977 through a Planned Development Ordinance. The AEC site would be subject to design and development standards within the No. 7 (Mixed Use) district as directed by the SEADIP (of the City of Long Beach General Plan and LCP). In addition, the AEC site and proposed wastewater pipeline alignment are zoned as PD; SEADIP (PD-1).

The SEADIP provides for a total community of residential, business, and light industrial uses integrated by an extensive system of parks, open space, and trails. In particular, the SEADIP includes provisions applicable to all areas as well as specific development and use standards applicable to subareas. Within the SEADIP, the AEC project site is located in Subarea 19, which is designated for industrial use consistent with the City's IG (General Industrial) zone. The proposed wastewater pipeline crosses Subareas 24, 9, and 22(b) of the SEADIP. Subarea 9 is fully developed with residential uses; Subarea 22(b): golf course open to the general public; and Subarea 24 "South": overlook area and interpretive center for the bordering marsh. The AEC consistency with all Specific Plan provisions applicable to visual resources is addressed in Table 5.13-4. It

would appear that many of the provisions of the SEADIP plan that are presented as “applying to all areas” are intended for areas that might be developed for residential use, as opposed to areas that are currently in industrial or energy-production use and which might be redeveloped for continued use for those purposes. It has been 37 years since the time that the SEADIP plan was adopted. Since that time, the zoning requirements for the Industrial General Zone that applies to the portion of Subarea 19 where the project would be located have not been revised to incorporate these provisions. Because these provisions of the plan have not been translated into mechanisms that would allow them to be enforced on the project site, it is assumed that they are not applicable to the project.

TABLE 5.13-4

Conformity with the City of Long Beach South East Area Development and Improvement Plan (SEADIP) Specific Plan

Provision	Conformity?
Provision A9	
All development shall be designed and constructed to be in harmony with the character and quality of surrounding development so as to create community unity within the entire area.	AEC is designed to be in harmony with the industrial zone in which it is located. The AEC will comply with applicable development policies set forth in the General Plan and SEADIP, and as required by state regulations. The project is also consistent with the General Industrial zoning development standards presented in Table 33-3 of Title 21 of the Municipal Code.
Provision A12	
Public views to water areas and public open spaces shall be maintained and enhanced to the maximum extent possible, consistent with the wetlands restoration plan.	The AEC does not block views of water areas and public open spaces. It will improve and enhance the views analyzed at the KOPs.
Provision A13	
Adequate landscaping and required irrigation shall be provided to create a park-like setting for the entire area. A landscaped parkway area shall be provided along all developments fronting on Pacific Coast Highway, Westminster Avenue, Studebaker Road, Seventh Street and Loynes Drive.	The existing Alamitos Generating Station has landscaping in place that complies with the requirements for setbacks, screening and vegetation with General Industrial zoning development standards for landscaping as presented in Table 5.13-5 below and Table 33-3 of Title 21 of the Municipal Code. The AEC would not affect landscaping that is already in place along Studebaker Road.

Source: City of Long Beach, 1977 (Amended 2006), 2007

5.13.5.2.3 City of Long Beach Municipal Code Zoning Ordinance, Title 21

Title 21 of the Municipal Code contains the Zoning Ordinance. The project site is zoned Planned Development (PD-1) Industrial IG zone. The AEC site is identified for industrial use, will replace and be constructed within the industrial site boundaries of the existing power plant, has an existing base of industrial uses, and is immediately surrounded by other industrial facilities. The provisions of the Municipal Code that are applicable to the project are discussed in detail in Section 5.6, Land Use. Those that pertain to visual resources are summarized in Table 5.13-5.

TABLE 5.13-5

Conformity with the City of Long Beach Municipal Code Zoning Ordinance

Provision	Conformity?
<p>21.42.010 Landscaping Standards</p> <p>Landscaping Purpose-Landscapes are intended to improve the physical appearance of the City by providing visual, ecological, and psychological relief in the urban environment. Successfully designed and maintained landscape areas provide an attractive living, working, and recreating environment in addition to their role in reducing water and energy consumption.</p> <p>General Requirement C –</p> <p>Plans Required. When applicable, a Landscape Document Package shall be approved prior to the issuance of any planning or building permit. For projects proposing landscape area coverage with a minimum of ninety percent (90%) very low to low water use plantings, ETWU and MAWA calculations are not required in the Landscape Document Package submittal. Applicable landscaping, irrigation, planter drainage, water reuse, retention and filtration improvements shall be implemented before any final building and planning inspection is approved.</p> <p>21.42.040 Landscaping standards for R-3, R-4 and Nonresidential Districts.</p> <p>Landscape Area Requirements.</p> <p>A. Applicability. All portions of a lot not paved or occupied by a structure shall be attractively landscaped. All required set back areas shall be landscaped unless used for a permitted use.</p> <p>B. Landscape Area Requirements</p> <p>On-Site Street Frontage- Within the required setback area along all street frontages, except at driveways, a minimum five-foot (5') wide landscaping strip (inside dimension to planter) shall be provided. This area shall be landscaped with one (1) tree for each fifteen (15) linear feet of street frontage and three (3) shrubs for each tree.</p> <p>Fences and retaining walls. All required fences and retaining walls shall be landscaped with vines planted no more than ten feet (10') on center on all accessible sides of a wall or alternative plant materials approved by the Director of Development Services.</p>	<p>The existing Alamitos Generating Station has landscaping in place that complies with the requirements for setbacks, screening and vegetation with General Industrial zoning development standards for landscaping as presented in Table 33-3 of Title 21 of the Municipal Code. No adjustments to setbacks or landscaping are proposed. The AEC will not affect landscaping that is already in place along Studebaker Road.</p>

Source: City of Long Beach, 2013a.

5.13.5.3 Summary of Project's Conformity with Applicable LORS

The project complies with applicable LORS related to visual resource issues.

5.13.6 Agencies and Agency Contacts

The City of Long Beach would be responsible for design review (see Table 5.13-6).

TABLE 5.13-6

Agency Contacts for Visual Resources

Issue	Agency	Contact
Design Review	City of Long Beach Development Services - Planning Bureau 333 W. Ocean Boulevard Long Beach, California 90802	Amy Bodek Development Services Director (562) 570-6428 Amy.Bodek@longbeach.gov

5.13.7 Permits and Permit Schedule

The City of Long Beach process that is of the most direct relevance to visual resource issues is the City's design review process, which includes site plan, architectural, and landscape elements. There are no permits related to visual resources; however, but for the exclusive jurisdiction of the CEC, which supersedes local permitting requirements, the City of Long Beach would normally conduct design and site plan review and approval for the project. However, because the CEC process supersedes this review and approval requirement from the City of Long Beach, the design of the AEC will not be approved by the City. As the permitting authority for the AEC, the CEC will accomplish the design review approval with the City as a reviewing agency. The CEC may request that the City review and comment on AEC final design and site plans prior to construction (see Table 5.13-7).

TABLE 5.13-7

Permits and Permit Schedule for Visual Resources

Permit or Approval	Agency Contact	Schedule
Design and Site Plan Review	Amy Bodek, Development Services Director City of Long Beach Development Services - Planning Bureau 333 W. Ocean Boulevard Long Beach, California 90802 (562) 570-6428 Amy.Bodek@longbeach.gov	Prior to construction, at discretion of CEC.

5.13.8 References Cited or Consulted

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Legend

- | | | | |
|--|--|---|---|
|  Project Boundary |  Proposed Stack Locations |  Key Observation Point |  City Limit |
|  Parking/Laydown Construction Area |  Process/Sanitary Wastewater Pipeline |  Character View |  25-foot Contour |

Source: Google, (2011).
Note: Because the air photo used as the base for this figure was taken in 2011, it does not include the six new LADWP generation units installed in 2012 and 2013.

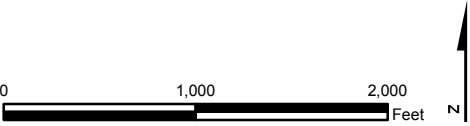
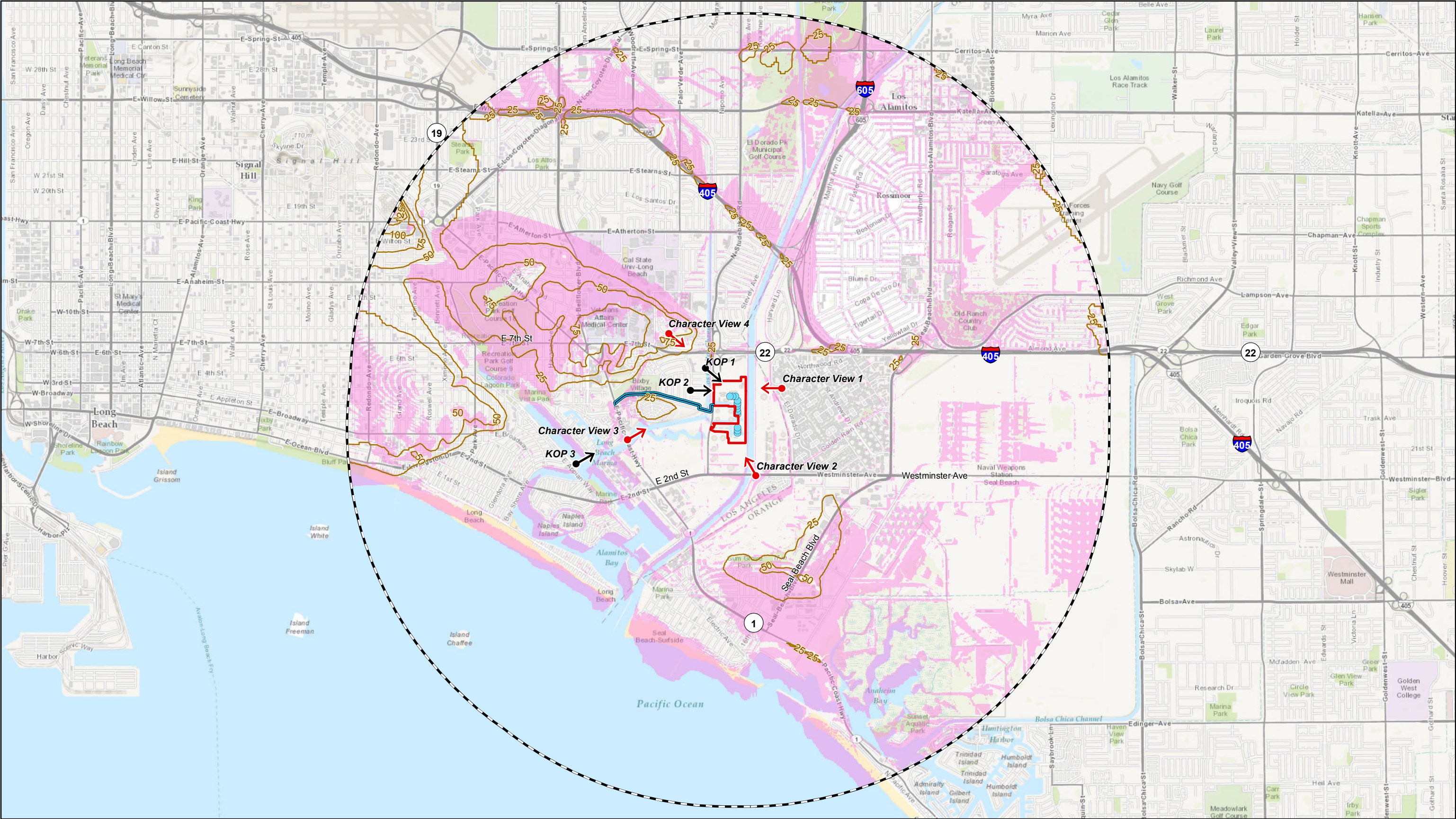


FIGURE 5.13-1
Project Components,
Key Observation Points and
Character Views
Alamitos Energy Center
Long Beach, California



Project Boundary

Process/Sanitary Wastewater Pipeline

25-foot Contour

Potential Stack Locations

Key Observation Point

Character View

3- Mile Radius from Project Boundary

Potential Stack Visibility

Not Visible, line of sight blocked by terrain

Areas where stacks have the potential to be visible

Notes:
Viewshed based on stack heights of 120 feet.
Elevation data from USGS 3 Meter DEM.

Service Layer Credits: Sources:
Esri, DeLorme, NAVTEQ, TomTom, Intermap,
increment P Corp., GEBCO, USGS, FAO,
NPS, NRCAN, GeoBase, IGN, Kadaster NL,



FIGURE 5.13-2
Project Viewshed, Key Observation Points
and Character View Locations
within 3 Miles of Project Site
Alhambra Energy Center
Long Beach, California



A. KOP-1. Existing view toward the project site from Channel View Park and Long Beach Bikeway Route 10.



B. KOP-1. Simulated view toward the project site after removal of the AGS facilities and replacement with the AEC. The AEC facilities will be just barely detectable above the tree line in the center of the view.

FIGURE 5.13-3
KOP-1. View from Channel View Park/Long Beach Bikeway Route 10
 Alamitos Energy Center
 December 2013



A. KOP-2. Existing view toward the project site from a street in University Park Estates, the residential area closest to the project site. A boiler and stacks that are part of the Alamos Generating Station that now occupies the project site are visible extending above the trees in the background of the view.



B. KOP-2. Simulated view toward the project site after removal of the AGS facilities and replacement with the AEC. The AEC structures will be partially visible behind the rooftops and trees in the foreground of the view.

FIGURE 5.13-4
KOP-2. View from University Park Estates
 Alamos Energy Center
 December 2013



A. KOP-3. Existing view toward the project site from Marine Stadium Park. The Alamitos Generating Station that now occupies the project site is visible in the left half of the view as the two power units with the large, scaffold-covered boilers as well as the tops of two white appearing stacks in the center-right of the view which are partially obscured behind commercial development. The stacks and generating units that extend along the horizon in the right half of the view are all part of the LADWP Haynes Generating Station.



B. KOP-3. Simulated view toward the project site after removal of the AGS facilities and replacement with the AEC. The AEC structures will be visible in the distance at the far end of the channel in the center of the view.

FIGURE 5.13-5
KOP-3. View from Marine Stadium Park
 Alamitos Energy Center
 December 2013



Character View -1. Existing view toward the project site from the Leisure World gated retirement community. The tall stacks that are prominently visible behind the structures in the foreground of the view are part of the LADWP Haynes Generating Station. The smaller, white appearing stacks visible in the background at the left and right sides of the view are part of the Alamos Generating Station that now occupies the project site.

FIGURE 5.13-6
Character View-1. View from Leisure World
 Alamos Energy Center
 December 2013



Character View -2. Existing view from Westminster Boulevard toward the Alamos Generating Station that now occupies the project site, visible on the left side of the San Gabriel River channel. The electric infrastructure visible on the right side of the view is part of the LADWP Haynes Generating Station.

FIGURE 5.13-7
Character View-2. View from Island Village
Alamos Energy Center
December 2013



Character View -3. Existing view toward the project site from the Pacific Coast Highway bridge over Los Cerritos Channel. The Alamos Generating Station that now occupies the project site is visible on the left and center of the view as the three power units with the large, scaffold-covered boilers. The stacks and generating units that extend along the horizon from the center to the right behind these AGS generating units are all part of the LADWP Haynes Generating Station.

FIGURE 5.13-8
Character View-3. View from Pacific Coast Highway Bridge
 Alamos Energy Center
 December 2013



Character View -4. Existing view toward the project site from North Hill Drive within the gated Bixby Hill single family residential community. Tops of stacks that are a part of the Alamos Generating Station that now occupies the project site are visible in the center of the view.

FIGURE 5.13-9
Character View-4. View from Bixby Hill
Alamos Energy Center
December 2013