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Attachment 6

Revised Visual Resources Application Section and Appendices

4.13 Visual Resources

This section discusses the existing landscape (built and natural) surrounding the Project facility, and the potential visual impacts associated with its construction and operation.

For the purposes of this analysis, visual resources refer to the natural and cultural landscape features that compose the landscape surrounding the Project and their qualities and contribution to landscape character. Natural landscape features include landforms, water features, and vegetation. Cultural landscape features include buildings, roadways, structures, and artificial lighting related to human land uses. The quality of the visual environment has a value to individuals, society, and the economy of a region, particularly in an area where scenic landscapes provide the backdrop for tourism and recreation activities.

Consistent with the California Energy Commission's Updates to Appendix B – Application Requirements (see 20 Cal. Code Regs. Div. 2, Ch. 5, App. B, (g)(6) Visual Resources), this section evaluates whether the Project would conflict applicable zoning and other local regulations governing scenic quality. This section was prepared in accordance with California Energy Commission (CEC) guidelines for preparing visual impact assessments for Opt-In Certification Applications and as such, includes a thorough investigation of scenic resources (i.e., scenic vistas, highways, overlooks, parks, trails, etc.) within a five-mile radius area centered on the Project site. Identified resources including sensitive built environment resources/structures, scenic vistas, State designated scenic highways and locally designated scenic roads, scenic overlooks, waterbodies, and public trails and parks were mapped and presented in a table format (see Appendix 4.13A, Scenic Resources within 5 miles of the Project site). The analysis also conforms with the documentation requirements of the California Environmental Quality Act (CEQA) (California Public Resources Code, Section 21000 et seq.). Despite the presence of numerous scenic resources within 5 miles of the Project site, this section focuses on resources (i.e., views and existing visual character) located in close proximity to the Project site that are likely to be affected by implementation of the Project.

Section 4.13.2 describes existing visual quality in the Project area. Section 4.13.3 documents the methods used to prepare this visual assessment, as well as potential environmental effects as they relate to visual resources. Section 4.13.4 discusses the potential cumulative impacts of this and other projects in the area. Section 4.13.5 summarizes the avoidance and mitigation measures proposed to address potential Project impacts on visual resources. Section 4.13.6 describes the applicable laws, ordinances, regulations, and standards relevant to visual resources. Section 4.13.7 lists agencies involved and agency contacts. Section 4.13.8 discusses permits related to visual resources and Section 4.13.9 lists the references used in preparation of this section.

4.13.1 Affected Environment

4.13.1.1 Regional Setting

A detailed investigation of the local landscape and scenic resources in the Project area was completed and is presented in Appendix 4.13A. As demonstrated therein, the regional setting is comprised of varied topography including canyons and valleys, hillsides and ridgelines, and coastal bluffs. The area features narrow canyons running north-south and east-west amongst residentially developed valleys and hillsides (commercial and recreational land uses are also commonplace in the area). The combination of residential uses and an established transportation network in a landscape featuring canyons, hillsides, ridges, and beaches produces numerous scenic resources and recreational amenities within five miles of the Project area. Please refer to Appendix 4.13A for additional information regarding inventoried scenic resources in the Project area.

4.13.1.2 Surrounding Area

The Project site is located in the northern portion of the City, adjacent to Camino Capistrano with Interstate (I) 5 located to the east. The Project site is currently used for low intensive church activities and is adjacent to the Saddleback Church Rancho Capistrano to the north, Oso Creek to the south and east, Union Pacific Railroad and I-5 to the east, and open space and residences outside of the City limits over the bluff to the west. The San Diego Gas & Electric Company (SDG&E) Trabuco to Capistrano 138-kilovolt transmission line is located approximately 500 feet to the east and runs alongside the Union Pacific Railroad tracks. A steep hillside lies to the immediate of west of the Project site, and terrain to the east slopes more gradually and encompasses development including roads, I-5, and residences and urbanized land uses on the east side of the I-5. Vegetation/land covers in the immediate area included developed/disturbed (associated with the on-site nursery and adjacent developed field/turf area to the north), grasses, and coastal sage scrub habitats (primarily on the hillsides to the west and southwest).

Immediately east of the Project study area lies Oso Creek, the Union Pacific Railroad, SDG&E transmission lines, and the I-5 freeway (a 14-lane freeway). Land uses to the east of I-5 include single-family residential neighborhoods with narrow corridors of intervening open space, a commercial office, and a high school (Capistrano Valley High School is located to the northeast of the Project site). Southeast of the Project study area, there are limited single-family residential uses that are bound by the Union Pacific Railroad track to the west and Camino Capistrano to the east, small agricultural operations, a historic structure ~~small winery~~/event space (i.e., Swanner House), the Putuidem Village/Northwest Open Space, a dog park, and undeveloped open space extending over to I-5. Beyond the crest of the hillsides to the west lies the City of Laguna Niguel, where the predominant land use is Single Family Residential (multifamily residential, public parks, schools, neighborhood shopping centers, and open space are also present). Open Space, Public/Institutional, and Single-Family Residential designations within the City of Laguna Niguel are located to the north of the Project study area. These areas include a partially developed hillside, an automobile dealership, and a single-family residential neighborhood.

No eligible or designated scenic highways occur within 2 miles of the Project site. The closest eligible scenic highway is Highway 74 from I-5 in San Juan Capistrano to State Route 111 in Palm Springs. Due to intervening development, vegetation, and terrain, the Project would not be visible from Highway 74. There are no officially designated state scenic highways in south Orange County.

The local area includes an existing 138-kilovolt transmission line (i.e., SDG&E's Trabuco to Capistrano line) that parallels the nearby Union Pacific Railroad corridor. As proposed, the Project would tie into this line, which is located approximately 500 feet to the east. In addition, the existing SDG&E Trabuco Substation is bound by the railroad corridor on the west and I-5 on the east, approximately 1.9 miles to the north, and the existing SDG&E Capistrano Substation is adjacent to Camino Capistrano, approximately 1.6 miles to the southeast.

This area is designated in the City's General Plan and in local zoning as Planned Community, and is currently authorized 80% institutional use and 20% assisted living use development. (City of San Juan Capistrano 2002). No designated public scenic vistas are identified in the City's General Plan Conservation and Open Space Element (City of San Juan Capistrano 1999a) and no recognized public scenic vistas in the surrounding area are known. A bluff trail is located atop the steep hillside to the west of the Project site; however, this trail is not identified by the City as a designated scenic vista and functions as a de facto private trail due to its primary access points being located in established residential neighborhoods and off residential neighborhood cul-de-sacs. While the General Plan Final Program Environmental Impact Report places aesthetic value on the City's extensive open spaces, natural

environment, and local ridgelines (City of San Juan Capistrano 1999b), the Project site does not encompass Open Space designated or zoned lands and therefore, the Project site is not considered a scenic resource by the City.

As further specified in Appendix 4.13A and in addition to nearby local roads, the Project site may be visible from several hillside and ridgeline trails in the surrounding area. Narrow and mostly blocked views to the Project site are available from the Northwest Open Space.

The landscape surrounding the Project includes hillside open space, and narrow and relatively flat valley terrain zoned for planned community and limited agricultural land use. Several recreational trails are located in the Project vicinity; however, the trails are located on private land to which the public lacks legal and physical right of access. While the local open space environment includes no sources of artificial nighttime lighting, nighttime viewing conditions are influenced by existing lighting sources from nearby residential, commercial (including at local automotive dealerships), and transportation (e.g., local streets and I-5) land uses. While streetlights are not installed along Camino Capistrano, lights are installed along the northbound travel lanes of I-5. Less frequent and transient, passing Metrolink trains also contribute artificial lighting to the local nighttime environment.

4.13.1.32 Project Site

Terrain underlying the Project site is flat to gently sloping, elevations range from approximately 165 feet above mean sea level on the east to 270 feet above mean sea level on the west. The Project site is currently utilized by the prior owner, Saddleback Church, and supports an active agricultural operation and other low intensity church activities.

As detailed in Section 2, Project Description, a loop-in transmission line would transfer power to and from the proposed SDG&E 138-kilovolt Interconnection Switchyard to the existing SDG&E Trabuco to Capistrano 138-kilovolt transmission line approximately 500 feet to the east of the Project site. The loop-in transmission line would be supported by up to five pole structures that would fully avoid Oso Creek. These poles consist of two poles on the Project site within the SDG&E switchyard, west of Oso Creek, two poles on the east side of Oso Creek, and three pole replacements on the east side of Oso Creek (two of which will be replacing existing poles; only one pole on the east side of Oso Creek will be new). The proposed loop-in alignment would extend from the existing railroad corridor, spanning the Oso Creek corridor and disturbed habitat that occurs to the immediate west of the creek corridor.

Views to the Project site are available from nearby Camino Capistrano, local recreational trails, and the Metrolink rail corridor. The Project site has limited visibility from the southbound travel lanes of I-5. The clearest views are potentially available from the I-5 shoulder and adjacent travel lane; however, the view duration from these locations is brief, the Project site is in the peripheral field of passing motorists, and views are partially blocked by the low concrete wall that parallels the interstate shoulder.

The view from publicly accessible ridgeline locations is expansive and include descending slopes, the Oso Creek corridor and adjacent disturbed lands to the west including the Project site, the I-5 corridor, residential neighborhoods and associated landscaping, and mostly undeveloped hills and ridgelines to the west of the I-5 corridor. Views from local hillside trails are narrower in nature, and while similar landscape elements as described above for the ridgeline locations are present, views are local and, in general, are not expansive. Lastly, available views from I-5 and the Metrolink corridor are short in extent (i.e., extend west to the local hillside terrain to the west of the Project site) and generally consist of the Oso Creek corridor, the Project site and nearby previously disturbed lands, and the local hill and canyon terrain.

4.13.1.43 Construction Staging Area

Staging areas would be provided within the footprint of the battery energy storage system (BESS) facility and will be relocated within the footprint as specific phases advance.

4.13.2 Environmental Analysis

4.13.2.1 Analysis Procedure and Methodology

4.13.2.1.1 Regulatory Setting

A review of existing local City and state planning documents was conducted to understand the regulatory context for visual resource management surrounding the Project. This review included CEQA, the California Scenic Highways Program, the San Juan Capistrano General Plan, and the San Juan Capistrano Municipal Code. These are detailed in Section 4.13.6.

4.13.3.1.2 Photographic Survey

A photographic field survey was conducted to obtain on-the-ground familiarity with the local landscape and general visibility of the project site, and to gather photographic images (and related geographic data) that help illustrate the existing visual character and quality of views to the project site. Specifically, photographs of daytime viewing conditions from southbound I-5 and northbound Camino Capistrano to the project site were taken. An additional photographic field survey was conducted by the Applicant in October 2023 to obtain updated photos characterizing views to the project site available from the southbound travel lanes of I-5. Lastly and following initial CEC review of this section, a photographic field survey was completed in June and October 2024 to obtain photos from selected viewpoints to the immediate north of the proposed BESS yard and immediate south of the proposed SDG&E switchyard.

4.13.2.1.3 Viewers and Exposure

The range of potential viewers that may be affected by a proposed Project can be described by the distinct types of viewers and the conditions they experience within the landscape. Understanding the types of viewers and their exposure to potential Project-related visual effects helps to predict sensitivity and response to visual change in the landscape. View exposure describes the degree to which views of the landscape and Project are provided to viewers. Viewer exposure considers viewing distance (proximity of viewers to the Project), frequency (the number of times the Project may be seen), and the duration (the length of time the Project may be seen) of the available view. The primary groups provided views to the Project and description of their exposure are based on definitions provided by the Federal Highway Administration (FHWA 2015).

Two types of viewers were identified in the Project assessment area that will be potentially affected by the Project. These consist of the following:10

- **Residential viewers:** Residential viewers consist of owners or renters of residential properties that are provided views to the Project and surrounding landscape. Compared to other viewer groups, residential viewers generally have a higher sensitivity to visual change and a desire to maintain features of the existing landscape as it contributes to their quality of life (and existing visual experience). There are a handful of ridgeline residents to the west of the Project site that may have views of the Project; however, those views

may be partially screened or blocked by intervening private yard landscaping. Also, because residential views are available from private yards/properties, viewing conditions and views from residential properties were not verified during photographic field surveys.

- **Motorists:** Motorists experience views of the passing landscape from their personal (or shared) vehicles while on the roadway. By necessity, the driver of a motor vehicle focuses less on the view outside the vehicle while passengers are free to view the adjacent landscape. Motorists move at higher speeds than other groups and have temporary and/or intermittent viewing opportunities. Within the Project area, this group includes motorists on local roads, including but not limited to Camino Capistrano and interstate (I-5) motorists passing through the region. Generally, local motorists on Camino Capistrano could experience more frequent) views compared to views provided to interstate travelers, however, those views would be at the same grade as the Project, and the Project would be obscured by the landscaping elements. Also, from the interstate, motorists generally move at high speeds (outside of peak hours where delays may occur), and views to the Project site are partially to fully blocked from most travel lanes by other passing vehicles, the low concrete wall that parallels the southbound travel lane, and the difference in elevation between the interstate surface and Project site (approximately 40 feet).

4.13.2.1.4 View Analysis

The view analysis is based on the potential for the Project to eliminate or obstruct a public view of a scenic vista or scenic resource. As noted in Section 4.13.2.1, no designated public scenic vistas are identified in the City's General Plan Conservation and Open Space Element (City of San Juan Capistrano 1999a) and no recognized public scenic vistas in the surrounding area are known. A bluff trail is located atop the steep hillside to the west of the Project site; however, this trail is not identified by the City as a designated scenic vista and functions as a de facto private trail due to its primary access points being located in established residential neighborhoods and off private residential neighborhood cul-de-sacs. While the General Plan Final Program Environmental Impact Report places aesthetic value on the City's extensive open spaces, natural environment, and local ridgelines (City of San Juan Capistrano 1999b), the Project site does not encompass designated Open Space or zoned lands and therefore, the Project site is not considered a scenic resource by the City. Therefore, the Project would not eliminate or obstruct a public view of a scenic vista or a scenic resource and as such, impacts to scenic vistas or scenic resources are not discussed further herein.

4.13.2.1.5 Lighting Analysis

The assessment of the existing nighttime visual character is based on the current perceived and actual lighting conditions in the existing landscape. To establish a baseline of pre-Project lighting conditions, existing sources of nighttime lighting were documented during desktop-level review of the landscape and during photographic field investigations. Levels of perceived skyglow are based on understanding of existing light sources in the landscape and primarily, those associated with residential and commercial land uses and transportation corridors located near the Project site. Lighting conditions in the Project landscape were documented qualitatively. No quantitative measurement of light or skyglow levels occurred during preparation of the lighting assessment.

Lighting conditions were evaluated qualitatively and were classified based on definitions and descriptions from established international lighting guidelines, which consist of a set of established environmental lighting zones for classifying exterior light levels (CIE 2017). Environmental lighting zones and related quantitative thresholds are shown in Table 4.13-2, Environmental Lighting Zone Classifications.

Table 4.13-2. Environmental Lighting Zone Classifications

Zone	Lighting Environment	Examples of Lighting Conditions
E0	Intrinsically dark	UNESCO Starlight Reserves, IDA Dark Sky Parks, Major optical observatories
E1	Dark	Relatively uninhabited rural areas
E2	Low district brightness	Sparsely inhabited rural areas
E3	Medium district brightness	Well inhabited rural and urban settlements
E4	High District brightness	Town and city centers and other commercial areas

Source: CIE 2017.

The assessment of Project-related lighting involved a review of available lighting information for the Project. Where limited or no detail regarding Project lighting was available, assumptions concerning general layout and illumination levels required for safe operations were made based on experience with similar BESS and switchyard facilities and related assessments. This information provided an estimate of the potential incremental increase in lighting that may result from the Project and was considered in a qualitative assessment as to whether anticipated light levels with the Project would exceed thresholds for environmental lighting zone classifications and result in the local area being classified as a less restrictive environmental lighting zone. For the purpose of this analysis and based on the description of environmental lighting zones, the Project area is within the E2/E3 environmental lighting zone. A change in an environmental lighting zone classification would signal a noticeable change in the perceived lighting conditions experienced by viewers during the nighttime. Because the Project proposes minimal downward facing lighting with sensor activation along access roads and throughout the BESS yard, no significant change in the lighting zone classification is anticipated.

4.13.2.1.6 Consistency Analysis

Consistent with CEC guidelines and in accordance with CEQA Guidelines Appendix G Environmental Checklist Form, an analysis of consistency between the Project and applicable General Plan and Municipal Code/Zoning policies and standards is required and presented below in Section 4.13.3.4, Analysis of Policy Consistency.

4.13.2.2 Project Appearance

4.13.2.2.1 Project Structures, Dimensions, and Materials

The primary Project components are described in Section 2. Figure 2-1 depicts the site plan and general layout of the Project components, including internal fencing and the proposed 20-foot-high screening trellises that would aid in the screening of Project components (primarily BESS enclosures) from users of Camino Capistrano and I-5). Table 4.13-3 identifies the aesthetic characteristics of the primary Project components with emphasis on dimensions, materials, and finishes.

Table 4.13-3. Characteristics of Primary Project Components

Component	Dimensions/Size	Materials	Finishes
Battery energy storage system (containers/enclosures)	28.87 feet × 9.14 feet × 5.41 feet	Prefabricated metal material	Light gray

Project substation (includes open rack air insulated switch gear, main power transformer, and pole to connect substation to SDG&E switchyard)	Varies: tallest component (dead end structure) would be 44 feet high	Prefabricated metal material	Light to dark gray
SDG&E switchyard (includes open rack air insulated switch gear and transmission control center)	Varies: tallest component (H frame structure) would be 55 feet high	Prefabricated metal material	Light to dark gray
Loop-in transmission line (supported by five poles)	Varies, up to 100 feet high	Tubular steel	Light to dark gray
Perimeter wall	10 feet tall	Prefabricated/precast concrete block decorative wall	Dark gray block
Security fence (internal site)[1]	6 feet tall	Chain-link with three strands of barbed wire	Light gray
Screening trellis (internal to site)[1]	20 feet tall	Wood trellis covered with vines	Tan (trellis), green (vines)
Landscaping[2]	20-foot-wide buffer area adjacent to perimeter wall Trees: 24-inch to 36-inch box size; 20 to 60 feet tall by 15 to 40 feet wide	Not applicable	Color varies by species

Notes: SDG&E = San Diego Gas & Electric Company.
1 See Figure 2-1 for location of security fencing and screening trellis.
2 The Project Preliminary Landscape Plan is included as Appendix 2B to this Application for Opt-In Certification.

As detailed in Table 4.13-3, finishes for materials and surface treatments will be predominantly flat and non-reflective to minimize the potential for glare. As noted in Table 4.13-3, the proposed facility would be surrounded by a decorative, 10-foot-tall, precast concrete block wall with primary site access via a restricted gate at the northeast corner of the facility (three internal gates would be installed to control access to the BESS facility and the Project interconnection switchyard, and a 6-foot-tall chain-link fence with three strands of barbed wire would be installed to separate the BESS facility from the proposed interconnection switchyard). In addition, 20-foot-high wooden trellises would be installed to the east of the BESS enclosure areas. The trellises would be structurally reinforced to support a dense covering of "climbing" artificial vines. Fencing, gating, and the screening trellises are shown on Figure 2-1. Visual Simulations of the Project appearance from two public vantage points are shown in Figures 4.13 2 and 2a, and 4.13-3 and 3a.

4.13.2.2.2 Construction Staging Area

Staging areas would be provided within the footprint of the BESS facility and will be relocated within the footprint as specific phases advance.

4.13.2.2.3 Lighting

Nighttime construction may be required for certain activities, but most construction work would occur during the hours permitted by the City's Noise Ordinance (7 a.m. to 6 p.m., Monday through Friday, and 8:30 a.m. to 4:30

p.m., Saturdays). When nighttime construction activity is required, all necessary temporary lighting will be directed on work areas and away from sensitive receptors such as nearby residences and habitat.

Permanent motion-sensitive, directional security lights would be installed to provide adequate illumination around the substation area and points of ingress/egress. All lighting will be shielded and directed downward to minimize the potential for glare, spillover onto adjacent properties, and skyglow. Levels of individual lighting sources would comply with recommendations of the Illuminating Engineering Society, CEC, and City of San Juan Capistrano Municipal Code Section 9-3.529(b)) ~~Ordinance No. 676 (Exterior Lighting Standards for Non-Residential Projects)~~ to ensure lighting is no brighter than necessary.

A Project-specific conceptual lighting plan for the BESS yard is provided as Appendix 4.13B, Conceptual Lighting Plan – BESS Yard and Access Roads. In addition, a Conceptual Switchyard Lighting Plan has been prepared and is provided as Appendix 4.13C, Conceptual Lighting Plan – SDG&E Switchyard. As proposed, approximately 60 permanent, motion-sensing and downward directed light fixtures would be installed atop poles to provide adequate illumination of the offsite access road, the internal BESS yard access roads, and the project substation. Consistent with City of San Juan Capistrano exterior lighting standards as established by Municipal Code Section 9-3.529(b), mounted fixture height would not exceed 20 feet in height as measured from finish grade to the bottom of the light fixture. All Project access road and BESS yard lighting will be shielded and directed downward to minimize the potential for glare, spillover onto adjacent properties, and skyglow. At the SDG&E switchyard, a total of 26 new lighting fixtures would be installed including sixteen (16) new fixtures on dead-end structures (25 foot high mounting height), two (2) fixtures mounted on the perimeter wall (8 foot high mounting height), one (1) flood light by the access gate (7 foot high mounting height), and seven (7) new fixtures lights mounted on the control shelter (10 foot high mounting height).

The City of San Juan Capistrano Municipal Code section 9-3.529, Lighting Standards subsection (b), establishes that "All properties located within a commercial (TC, OC, NC, and GC) district, industrial (CM and IP) district, public institutional (P&I) district, Solid Waste Facility (SWF) district, Farm Market (FM) District, Recreation Commercial (RC) District, and nonresidential portions of special districts including Planned Community (PC) and Specific Plan/Precise Plan (SP/PP) districts shall be subject to the exterior lighting regulations set forth." Section 9-3.529(b) includes exterior lighting regulations for (1) parking lots, (2), pedestrian walkways, (3) architectural and landscape lighting, (4) exterior display lighting, and (5) security lighting. As the Project does not include parking lots, pedestrian walkways, architectural and landscape lighting, and exterior display lighting, the associated regulations are not applicable to the Project. Security lighting is included/proposed and as such, the City of San Juan Capistrano security lighting regulations are applicable to the Project. All Project access road and BESS yard lighting would be installed consistent with applicable City of San Juan Capistrano Exterior Lighting Regulations (including those concerning maximum fixture height, light source, fixture spacing, and shielding). In addition, the Project-specific luminaries for the access road and BESS yard would be full-cutoff Evolve EALS Series LED Outdoor Area Light (see Appendix 4.13D) and have the International Dark-Sky Association Fixture Seal of Approval.

The finishes of materials used as exterior surfaces included dulled metallic components that not typically associated with the generation of substantial glare, further information on the materials used in the exterior of Project components is listed in Table 4.13-3 above.

4.13.2.2.4 Perimeter Wall and Landscaping

A 10-foot-tall perimeter wall will be constructed that consists of a prefabricated concrete decorative wall that will be utilized for both visual enhancement and fire protection. This wall will be combined with perimeter landscaping and a 20-foot-tall visual screening fence to minimize or eliminate visual impacts from public views. A detailed Landscape Plan is provided in Appendix 2B.

The Project will incorporate a 20-foot landscape buffer around the perimeter for screening and aesthetic enhancement. The landscape buffer will consist of a mixture of trees, shrubs and groundcover, and vines to create a varied, aesthetically pleasing visual buffer. As proposed, the total landscape area is 110,260 square feet (2.53 acres). Trees within the landscape buffer will include species native to southern California (e.g., Coast Live Oak and Catalina Ironwood), 24-inch box size, with mature heights of 20 to 50 feet and widths of 15 to 50 feet, depending on the tree type. Additional information related to planting sizes, spacing, quantities, and representative tree photographs are included in Appendix 2B. All plantings will require minimal supplemental irrigation once established.

4.13.2.3 Assessment of Impacts to Public Views

This section provides an assessment of visual effects provided for daytime viewing from southbound I-5 and general lighting effects.

4.13.2.3.1 Public Views

As previously identified, two representative public views from southbound I-5 and northbound Camino Capistrano were selected for assessment of anticipated visual impacts resulting from Project operations (see Figure 4.13-1). Following CEC review of public views and associated visual simulations from locations on Interstate 5 and Camino Capistrano, additional viewpoints were established to the immediate north of the proposed BESS yard and the immediate south of the proposed SDG&E switchyard. Existing conditions photographs and ~~V~~visual simulations of the Project are presented in Figures 4.13-2 through 4.13-5b ~~and 2a and 4.13-3 and 3a~~. Visual simulations of the Project at 1-year after installation of landscaping and at 10-years after installation of landscaping were prepared and are included (see Figures 4.13-2a and -2b, 4.13-3a and -3b, 4.13-4a and -4b, and 4.13-5a and -5b). Ratings of visual contrast were assigned for the selected views and consider the characteristics of Project components within ~~the existing~~the proposed landscaping~~e~~ conditions. A rating of visual impact is presented in Table 4.13-4 and is informed by viewer sensitivity and anticipated level of perceptible contrast. In addition, Table 4.13-4 summarizes the viewers, contrast, and impact for each selected public view.

Table 4.13-4. Visual Impact for Representative Southbound I-5 View

View	Viewers	Visual Contrast	Visual Impact
Southbound Interstate 5 (View 1)	▪ Represents views of passing southbound motorists from slightly elevated vantage point (in comparison to Project site)	▪ Rating: **Moderate** ▪ Form and scale of perimeter wall visible but landscaping/ screening (primarily 20-foot-tall screening trellises) helps to soften its introduction into the landscape	▪ Rating: **Low** ▪ Partially blocked view of Project components ▪ Low viewer sensitivity due to peripheral view of motorists/passengers and prevailing travel speeds

Table 4.13-4. Visual Impact for Representative Southbound I-5 View

View	Viewers	Visual Contrast	Visual Impact
	▪ Within foreground viewing distance of the Project site (approximately 550 feet away) ▪ High number of viewers ▪ Mostly blocked views to Project site available to motorists	▪ Limited visibility of boxy battery energy storage enclosures and tan/ paved surface of facility ▪ Scale of substation, switchyard, and loop-in features detectable but overall contrast reduced by existing transmission infrastructure in landscape (and by light gray color)	▪ The existing character of the site is visibly altered by Project components, but Project introduction softened by landscaped screening and by assortment of transmission lines and poles in the landscape
Camino Capistrano (View 2)	▪ Represents views of passing northbound motorists from slightly elevated vantage point (in comparison to Project site) ▪ Within foreground viewing distance of the Project site (approximately 620 feet away) ▪ Low to moderate number of viewers ▪ Mostly clear and unimpeded views to Project site available to motorists	▪ Rating: **Moderate-** ▪ Boxy battery energy storage enclosures, tan/paved surface of facility, and perimeter wall may be partially visible but blocked by proposed landscaping (trees) at grade ▪ Scale of substation, switchyard, and loop-in features (and number of vertical structures) detectable but overall contrast reduced by existing transmission infrastructure in landscape (and by light gray color and thin form/line of components)	▪ Rating: **Moderate** ▪ Mostly clear, unimpeded views of Project components ▪ Moderate viewer sensitivity due to close proximity of motorists/ passengers and prevalent travel speeds on local surface roads ▪ The existing character of the site is visibly altered by Project components, but Project introduction is softened by landscaping and backscreening of Project components.
North of proposed BESS yard (View 3)	▪ Represents views of trail users from normal angle vantage point (in comparison to Project site) ▪ Within foreground viewing distance of the Project site (approximately 650 feet away) ▪ Low number of viewers ▪ Clear and unimpeded views to Project site	▪ Rating: **Moderate**	▪ Rating: **Moderate** ▪ Clear, unimpeded views of Project components (primarily perimeter wall, landscaping, and taller substation and switchyard components) ▪ Moderate to high viewer sensitivity due to close proximity of trail users

Table 4.13-4. Visual Impact for Representative Southbound I-5 View

View	Viewers	Visual Contrast	Visual Impact
		▪ Battery energy storage enclosures would be blocked/concealed from view by the proposed perimeter wall (10 foot high) along the northern Project site boundary that would be planted with fast growing vines supported by nursery stakes. Other visible project components include the grey backside of the proposed perimeter wall along the eastern Project site boundary, grey backside of the proposed visual screening fencing fence (20 foot high) that would be planted with vines, and vertical poles/structures (and associated conductor lines) and bays at the proposed substation and switchyard. ▪ Scale of substation, switchyard, and loop-in features noticeable but overall contrast reduced by existing transmission infrastructure in landscape (and by back screening of vertical features by local mountainous terrain	▪ The existing character of the site is visibly altered by Project components, but Project introduction is softened by landscaping and backscreening of Project components. At installation, landscaping would help mask the grey color of the perimeter wall and as landscaping matures, proposed trees would effectively block the northern perimeter wall from view and would block portions of the easterly perimeter wall, visual screening fence, and substation and switchyard components from view.
South of proposed SDG&E Switchyard (View 4)	▪ Represents views of trail users from normal angle vantage point (in comparison to Project site) ▪ Within foreground viewing distance of the Project site (approximately 210 feet away) ▪ Low number of viewers	▪ Rating: **Moderate/Strong**	▪ Rating: **Moderate/Strong** ▪ Clear, unimpeded views of Project components (access road, perimeter wall, landscaping, and taller switchyard and loop-in components) ▪ Moderate to high viewer sensitivity due to close proximity of trail users to Project site.

Table 4.13-4. Visual Impact for Representative Southbound I-5 View

View	Viewers	Visual Contrast	Visual Impact
	▪ Clear and unimpeded views to Project site	▪ Proposed access road (dark grey pavement), perimeter wall, switchyard and loop-in poles are visually prominent. Sections of the wall are partially blocked by newly installed landscape trees, but the centrally located loop-in structure is unscreened and skylined (viewed against the background sky). ▪ Hard edges of access road and perimeter wall produce color, form, and line contrast; close proximity and scale of switchyard and loop-in structure create visible line and scale contrast that is heightened at this particular location	▪ Existing character of site is visibly altered by Project components; presence of distant transmission infrastructure along Camino Capistrano has a weak softening effect on Project introduction ▪ Moderate/strong visual impact at landscape installation is reduced to moderate as landscaping matures

~~From southbound I-5 and northbound Camino Capistrano, the contrast rating is moderate t and the overall impact is moderated by the installation of proposed perimeter landscaping, perimeter walls, and the vine-covered trellises that as experienced from southbound I-5, would block most storage enclosures from view of passing motorists and more generally, soften the introduction of the overall Project into the landscape.~~

4.13.2.3.2 Lighting Effects

The limited, infrequent nature of nighttime lighting required during Project construction would be temporary and short-term and is not expected to substantially affect nighttime viewing, including nighttime views from ridgeline residences located to the west of the Project site. In addition, the Project site is situated near existing (and regular) sources of nighttime lighting, including I-5 and commercial development along the I-5 corridor (including car dealerships to the north of the Project site). While in less frequent operation, the rail corridor that roughly parallels the interstate is also a source of nighttime lighting in the local landscape.

While lighting required during Project operations would create new sources of light, lighting from the Project during operations would be a minor contributor to light levels and is not anticipated to change the overall nighttime light environment.

4.13.2.4 Analysis of Policy Consistency

Pursuant to CEC Application Requirements and Appendix G of the CEQA Guidelines, there are two pathways in preparing an assessment of potential impacts to visual resources. Specifically, the CEC Application Requirements and Appendix G of the CEQA Guidelines state the following with regard to assessing impacts on visual character:

> In nonurbanized areas, [would the project] substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

CEQA defines an "urbanized area" as an incorporated area that has a population of at least 100,000 persons, either by itself or by adding the population of the city with no more than two contiguous incorporated cities. (Pub. Res. Code sec. 21071(a)(1) – (2).). While the 2020 population of the City of San Juan Capistrano was 35,196 persons, the combined 2020 population of San Juan Capistrano and two contiguous incorporated cities (Laguna Niguel (64,355 persons) and Dana Point (33,107 persons) is 132,658 persons (U.S. Census Bureau 2020). As the City of San Juan Capistrano qualifies as an "urbanized area" under CEQA, the urbanized area threshold requiring an assessment of scenic quality policy and regulation consistence is the appropriate threshold to apply (and is referenced below).

Table 4.13-5 details the Project's conformity with policies and standards governing scenic quality. As demonstrated in Table 4.13-5, below, implementation of the Project by the applicant will not conflict with an applicable regulation governing scenic quality.

Table 4.13-5. Project Conformity with Regulations Governing Scenic Quality

Goal/Policy	Project Consistency
City of San Juan Capistrano General Plan	
Land Use Element	
Goal 4: Preserve major areas of open space and natural features.	**Consistent.** The Project would be constructed on the flatter areas of the Church Property and the slopes to the west would be maintained in their current, natural condition. There are narrow portions of the Church Property along Oso Creek that are zoned and designated as "General Open Space." The Oso Creek Channel runs from the North to the South near the Eastern property line of the Project Site. City maps also show a recreational trail through the Project Site called the North Open Space trail which would be realigned approximately 500 feet to the west as part of the Project. The Project would completely avoid Oso Creek (transmission pole would be sited outside the creek area) and the recreational trail would be maintained. The inclusion of project landscaping is not required to ensure project consistency with this goal.
Policy 7.1: Preserve and enhance the quality of San Juan Capistrano neighborhoods by avoiding or	**Consistent.** The Project will be located within the larger Church Property and is a substantially similar land use to already permitted interim uses within the Planned

Table 4.13-5. Project Conformity with Regulations Governing Scenic Quality

Goal/Policy	Project Consistency
abating the intrusion of non-conforming buildings and uses.	Community zone. The Project will also be screened by a landscape buffer and 20-foot-tall screening fence. At installation, landscaping would partially block the perimeter Project wall from view at select nearby locations to the north and south of the Project site but would not be effective at screening Project walls and other components from view at nearby elevated locations including ridge trails. While full screening of the Project site and components at elevated viewpoints would not be achievable due to the location of the Project in a narrow valley landscape with developed uses on/atop ridges to the east and west, project landscaping including vine-covered trellises would help to abate the overall visibility of Project components from off-site viewing locations. Project consistency with this policy would occur following installation of proposed landscaping and would continue throughout the operational life of the Project as landscaping is maintained (and matures).
Policy 7.2: Ensure that new development is compatible with the physical characteristics of its site, surrounding land uses, and available public infrastructure. Community Design Element Policy 2.1: Encourage development which complements the City's traditional, historic character through site design, architecture, and landscaping.	**Consistent.** The Project Site was selected given its location within a high energy demand area and the close proximity of existing SDG&E transmission facilities. The Project site is one of the few remaining viable areas of undeveloped land in Orange County. The topography is such that significant grading and civil improvements will not be required, and the Project location results in the need for minimal new high-voltage facilities to interconnect into the SDG&E grid with only 500 feet of improvements. The Project site is also located immediately adjacent to existing roadways that provide readily available access for construction and operations. The site is also located outside of sensitive biological habitat, is outside of the City's historic core/downtown area, and has been mostly previously disturbed. The inclusion of project landscaping is not required to ensure project consistency with this goal.
Community Design Element Policy 3.3: Preserve and enhance scenic transportation corridors, including Interstate 5 and the railroad.	**Consistent.** While the General Plan Final Program Environmental Impact Report places aesthetic value on the City's extensive open spaces, natural environment, and local ridgelines (City of San Juan Capistrano 1999b), the Project site does not encompass designated Open Space or zoned lands and therefore, the Project site is not considered a scenic resource by the City. Also, from southbound I-5 and northbound Camino Capistrano, the contrast rating is minor to moderate, and the overall impact is moderated by the presence of the perimeter landscaping and the vine-covered trellises

Table 4.13-5. Project Conformity with Regulations Governing Scenic Quality

Goal/Policy	Project Consistency
	that, following installation would help screen battery storage enclosures from view of passing motorists and would more generally, ~~would block most storage enclosures from view of passing motorists and more generally,~~ soften the introduction of the overall Project into the landscape. As landscaping (i.e., trees) matures, screening of the Project perimeter wall, battery storage enclosures, and substation components would increase/improve. Project consistency with this policy would occur following installation of proposed landscaping and would continue throughout the operational life of the Project as landscaping is maintained (and matures).

4.13.3 Cumulative Effects

CEQA Guidelines Section 15355 defines cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." The assessment of cumulative effects measures and describes the effects of adding the incremental changes from the Project to the effects of past projects and the predicted incremental change of current planned projects and proposed future projects.

The landscape in the region surrounding the Project demonstrates evidence of past and present visible disturbances related to agriculture, transmission and transportation infrastructure, and residential and commercial development. Based on the severity of change depicted in visual simulations, Project effects on existing visual character are not anticipated to substantially degrade existing visual character or quality, and there are no known planned or proposed future projects within the local viewshed that would create cumulative visual impacts in combination with the Project. As a result, the Project will not cause significant cumulative effects to visual resources.

4.13.4 Avoidance and Minimization Measures

The proposed Project would not result in a significant impact to visual resources; therefore, no mitigation is required.

4.13.5 Laws, Ordinances, Regulations, and Standards

4.13.5.1 Federal Policies and Regulations

No federal visual resource–related laws, ordinances, regulations, and standards exist relevant to the Project assessment area.

4.13.5.2 State Policies and Regulations

California Environmental Quality Act

CEQA generally requires state and local government agencies to inform decision makers and the public about the potential environmental impacts of proposed projects and to reduce those environmental impacts to the extent feasible.

The laws and rules governing the CEQA process are contained in the CEQA statute (California Public Resources Code, Section 21000 et seq.), the CEQA Guidelines (14 CCR 15000 et seq.), published court decisions interpreting CEQA, and locally adopted CEQA procedures.

California Scenic Highways Program

In 1963, the California Legislature created the Scenic Highway Program to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to the highways. The state regulations and guidelines governing the Scenic Highway Program are found in Section 260 et seq. of the Streets and Highways Code. A highway may be designated as scenic depending on 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 travelers' enjoyment of the view (Caltrans 2008). A state route must be included on the list of highways eligible for scenic highway designation in Streets and Highways Code Section 263 for it to be nominated for official designation (eligible state routes are those that have been listed in Section 263 by the state legislature).

As described in Section 4.13.2.1, Regional Setting, no eligible or designated scenic highways occur within 2 miles of the Project site. The closest eligible scenic highway is Highway 74 from I-5 in San Juan Capistrano to State Route 111 in Palm Springs. Due to intervening development, vegetation, and terrain, the Project would not be visible from Highway 74. There are no officially designated state scenic highways in south Orange County. Therefore, the Project is not required to consider the state Scenic Highway Program.

4.13.5.3 Local Policies and Regulations

San Juan Capistrano General Plan

The Land Use Element (City of San Juan Capistrano 2002) and Community Design Element (City of San Juan Capistrano 1999c) of the City's General Plan include goals and policies related to open space, community and neighborhood character, and views including the following:

- **Land Use Goal 4:** Preserve major areas of open space and natural features.
- **Land Use Policy 7.1:** Preserve and enhance the quality of San Juan Capistrano neighborhoods by avoiding or abating the intrusion of non-conforming buildings and uses.
- **Land Use Policy 7.2:** Ensure that new development is compatible with the physical characteristics of its site, surrounding land uses, and available public infrastructure.
- **Community Design Element Policy 2.1:** Encourage development which complements the City's traditional, historic character through site design, architecture, and landscaping.
- **Community Design Element Policy 3.3:** Preserve and enhance scenic transportation corridors, including Interstate 5 and the railroad.

San Juan Capistrano Municipal Code

San Juan Capistrano Municipal Code Section 9-3.~~614~~ 529(b), Lighting Standards, establishes exterior lighting standards for parking lots, pedestrian walkways, architectural and landscape lighting, exterior display lighting, and security lighting within commercial industrial and public institutional districts and more specifically, on all properties located within a commercial (CN, CT, CG, CM, FM, and CO), industrial (MG and MP), and public institutional (IP) district, special districts including Planned Community (PC), Planned Development (PD), and Precise Plan (SP) district. The lighting levels are dictated by level of activity (high, medium, and low).

As the Project does not include parking lots, pedestrian walkways, architectural and landscape lighting, or exterior display lighting, City standards associated with these lighting types are not applicable. However, since facility security is a relevant issue, project lighting (specifically, access road and BESS yard lighting) has been designed consistent with the applicable standards for Parking Lot Lighting (Enhanced Security Area) as established in Section 9-3.529, Lighting Standards, (b) (Table 3-23) and as presented below. There are specific requirements for the SDG&E switchyard as the switchyard is required to meet National Electrical Safety Code 2017 Section 111 Illumination and SDG&E Substation Lighting Requirements (SES-4301). Thus, switchyard lighting would not be installed wholly consistent with City standards.

Table 4.13-6. City of San Juan Capistrano Parking Lot Lighting Design Standards

Feature	Standards
Fixture Height	Pole mounted fixtures shall not exceed 20 feet in height as measured from finish grade to the bottom of the light fixture. Concrete pedestals shall not exceed 24 inches and shall be included in the overall height. Building mounted fixtures shall be located below the roof eave and not exceed the height of the pole mounted fixture (20 feet) whichever is lower.
Light Source	Metal halide, high pressure sodium, and similar sources shall be permitted. Halogen and mercury vapor sources shall be prohibited.
Fixture Type	Within the Town Center (TC) and Town Center Edge Districts, contemporary styled fixtures shall be prohibited. Freestanding light fixtures must comply with the City-established list of pre-approved fixture styles using a horizontal light that does not project below the cut-off lenses. For building mounted fixtures, the Planning Director shall insure that the proposed fixture type will be in scale with the building elevation on which it is to be installed. The Planning Director may refer this latter determination to the Planning Commission.
Spacing of Fixtures	The distance separating lights shall be determined by the type of light fixture and the requirement to satisfy the intensity provisions for "Fixture Height" above.
Shielding	Shielding shall be required so that light measured 5 feet outside the property boundary shall not exceed 0.1 footcandle. Exterior lighting fixtures that will be visible from adjacent residential areas shall be oriented such that the light source is not visible from said adjacent property.

Lastly, the following standard specific to security lighting is also applicable:

- Security lighting shall be provided and shall include all pedestrian lighting, signs (if used as security illumination), not more than 0.1 of the parking lot lights (these lights shall be equipped with a photocell for dusk to dawn illumination), and required lights over all building entries. Exterior lighting including parking

lots shall be reduced in intensity between 10:00 p.m., or one-half hour after close of business, whichever is later, and 6:00 a.m.

4.13.6 Agencies and Agency Contacts

No agencies were contacted during preparation of this visual resources evaluation.

4.13.7 Permits and Permit Schedule

There are no permits related to visual resources that are required to construct the Project. CEC will work with the City on review of this application to ensure compliance with City policies and ordinances related to visual resources, as well as potential conditions (e.g., landscaping plan).

4.13.8 References

BLM (Bureau of Land Management). 1986. *Manual 8431 – Visual Resources Contrast Rating*.

Caltrans (California Department of Transportation). 2008. *Scenic Highway Guidelines*. Landscape Architecture Program, Division of Design. October.

Caltrans. 2017. "2017 Traffic Volumes: Routes 5-6." Accessed November 16, 2023. https://dot.ca.gov/programs/traffic-operations/census/traffic-volumes/2017/route-5-6.

CIE (International Commission on Illumination). 2017. *Guide on the Limitation of the Effects of Obtrusive Light from Outdoor Lighting Installations.* 2nd Edition.

City of San Juan Capistrano. 1999a. "Conservation and Open Space Element." In *San Juan Capistrano General Plan.* December 14, 1999.

City of San Juan Capistrano. 1999b. *Final Program Environmental Impact Report for the San Juan Capistrano General Plan*. December 1999.

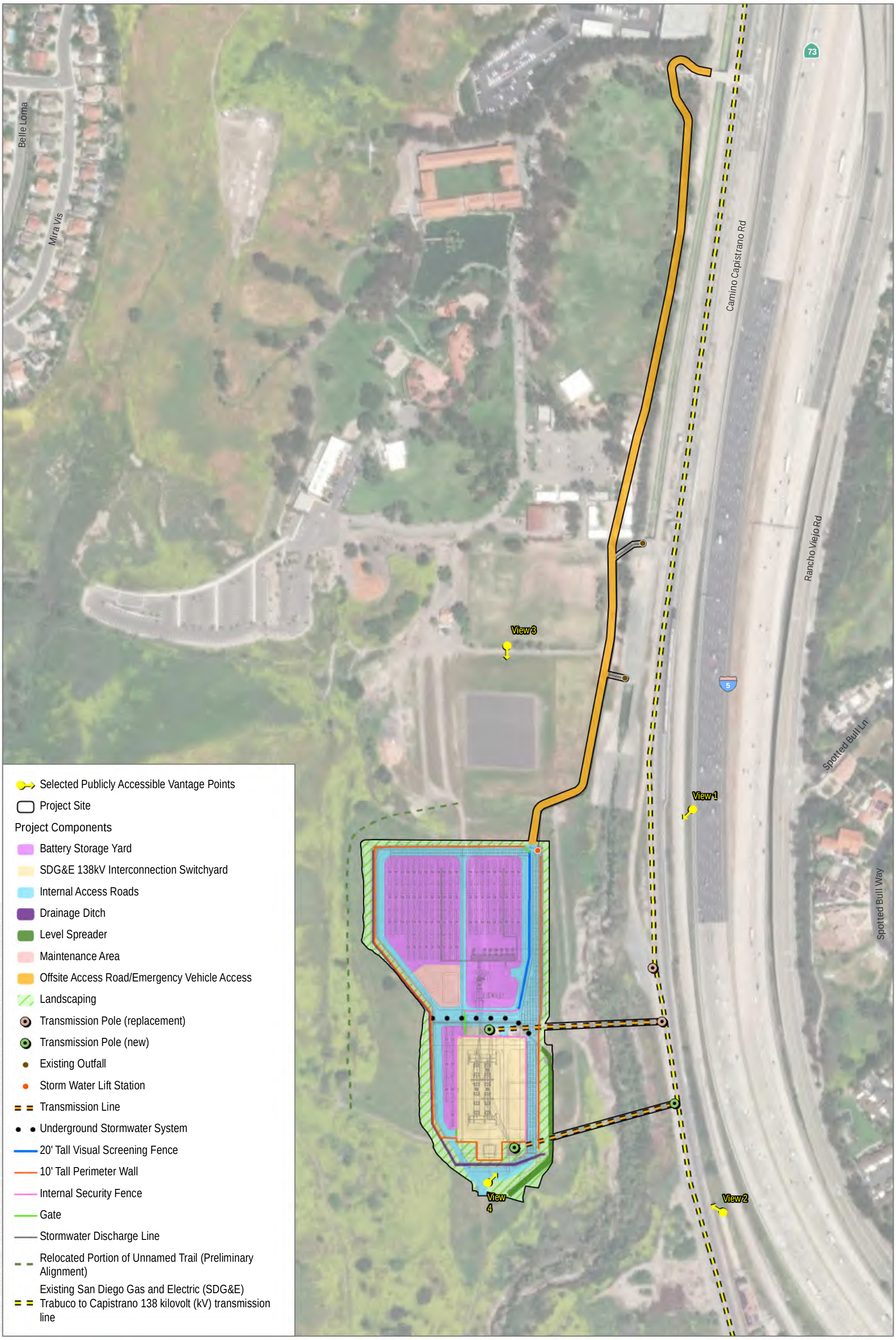
City of San Juan Capistrano. 1999c. "Community Design Element." In *San Juan Capistrano General Plan.* December 14, 1999.

City of San Juan Capistrano. 2002. "Land Use Element." In *San Juan Capistrano General Plan.* May 7, 2002.

City of San Juan Capistrano. 2021. "Map of SJC Recreational Trail System." September 21, 2021.

FHWA (Federal Highway Administration). 2015. *Guidelines for the Visual Impact Assessment of Highway Projects*. January 2015. Accessed November 2023. https://www.environment.fhwa.dot.gov/env_topics/other_topics/VIA_Guidelines_for_Highway_Projects.aspx.

U.S. Census Bureau. 2020. Census Bureau Data for San Juan Capistrano, Dana Point, and Laguna Niguel. https://data.census.gov/. Accessed February 29, 2024.



SOURCE: Bing Maps 2023; Sargent & Lundy 2023

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FIGURE 4.13-1

Selected Publicly Accessible Vantage Points

Compass Energy Storage Project

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View to the southwest from Interstate 5 (Project site located 550 feet away)

FIGURE 4.13-2

View 1: Southbound Interstate 5 (Existing Conditions)

Compass Energy Storage Project

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View to the southwest from Interstate 5 with Visual Simulation of Project included (approximately 1 year vegetation maturity)

FIGURE 4.13-2a

View 1: Southbound Interstate 5 (Visual Simulation 1 Year Vegetative Maturity)

Visual Resources Section - Compass Energy Storage Project

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View to the southwest from Interstate 5 with Visual Simulation of Project included (approximately 10 years vegetation maturity)

FIGURE 4.13-2b

View 1: Southbound Interstate 5 (Visual Simulation 10 Year Vegetative Maturity)

Visual Resources Section - Compass Energy Storage Project

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View to the northwest from Camino Capistrano (Project site located 620 feet away)

FIGURE 4.13-3

View 2: Northbound Camino Capistrano (Existing Conditions)

Compass Energy Storage Project

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View to the northwest from Camino Capistrano with Visual Simulation of Project included (approximately 1 year vegetation maturity)

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FIGURE 4.13-3a

View 2: Northbound Camino Capistrano (Visual Simulation 1 Year Vegetative Maturity)

Compass Energy Storage Project

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View to the northwest from Camino Capistrano with Visual Simulation of Project included (approximately 10 years vegetation maturity)

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FIGURE 4.13-3b

View 2: Northbound Camino Capistrano (Visual Simulation 10 Year Vegetative Maturity)

Compass Energy Storage Project

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View to the south from north of the Project site (Project site is located 635 feet away)

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FIGURE 4.13-4

View 3: North of Project Site (Existing Conditons)

Compass Energy Storage Project

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View to the south from north of the Project site with Visual Simulation of Project included (approximately 1 year vegetation maturity)

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FIGURE 4.13-4a

View 3: North of Project Site (Visual Simulation 1 Year Vegetative Maturity)

Compass Energy Storage Project

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View to the south from north of the Project site with Visual Simulation of Project included (approximately 10 years vegetation maturity)

FIGURE 4.13-4b

View 3: North of Project Site (Visual Simulation 10 Year Vegetative Maturity)

Compass Energy Storage Project

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View to the northeast from south of the Project site (View is from the southernmost limit of the Project site)

FIGURE 4.13-5

View 4: South of Project Site (Existing Conditions)

Compass Energy Storage Project

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View to the northeast from south of the Project site with Visual Simulation of Project included (approximately 1 year vegetation maturity)

FIGURE 4.13-5a

View 4: South of Project Site (Visual Simulation 1 Year Vegetative Maturity)

Compass Energy Storage Project

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View to the northeast from south of the Project site with Visual Simulation of Project included (approximately 10 years vegetation maturity)

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FIGURE 4.13-5b

View 4: South of Project Site (Visual Simulation 10 Year Vegetative Maturity)

Compass Energy Storage Project

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Appendix 4.13A

Scenic Resources Within 5 Miles

ProjectBoundary
5 Mile Buffer
Waterbodies

Sensitive Visual Resources - Built Environment
1,Mission Basilica San Juan Capistrano
2,Courtyard at La Paz
3,Swanner House

Trails
1,Colinas Bluff Trail
2,West Ridge Trail
3,Top of the World
4,Lynx Trail
5,Mathis Canyon Trail
6,Car Wreck Trail
7,Coyote Run Trail
8,Rock It Trail
9,5 Oaks Trail
10,Wood Canyon Trail
11,Aliso Creek Hiking and Bike Trail
12,Aliso Creek Trail East
13,Aswut Trail
14,Meadows Trail
15,Sheep Run Trail
16,Arroyo Trabuco Trail
17,Patriot/Flagpole Hill Trail
18,Trabuco Creek Trail
19,Foster/Shea Trail
20,Colinas Ridge Trail
21,Salt Creek Trail
22,Oso Rancho Trail
23,Peppertree Bend trail
24,San Juan Creek Trail
25,Las Ramblas Trailhead
26,Los Mares Trail
27,Prima Deshecha Trail
28,Jeep Trail
29,W. La Rhonda Trail
30,Entrada Trail
31,Helicopter Hill/ Malaspina Trail
32,Stone Ridge Trail
33,Nature Trail

Scenic Routes/Highways/Landscape Corridors
1,Oso Parkway
2,La Paz Road
3,Alicia Parkway
4,Niguel Road
5,Crown Valley Parkway
6,Moulton Parkway/Golden Lantern
7,Camino Del Avion
8,Del Obispo Street
9,Antonio Parkway
10,Cow Camp Road
11,Wood Canyon Drive
12,Hwy 5 - Eligible State Scenic Highway
13,Hwy 74 - Eligible State Scenic Highway
14,Hwy 1 - Eligible State Scenic Highway

Scenic Overlooks
1,Canyon Overlook
2,Moulton Peak
3,Alwut Overlook
4,Scenic Overlook
5,Top of the World
6,Scenic Overlook
7,Scenic Overlook
8,Aliso Peak

Parks/Coastal Resources
1,Aliso and Woods Canyon Wilderness Park
2,Mendocino Park
3,Mandeville Park
4,Moulton Ranch Park
5,NorthWest Open Space
6,Treasure Island Park
7,Lang Park
8,Village Green
9,Salt Creek Beach Bluff Park
10,Sea Terrace Community Park
11,Dana Crest Park
12,Sea Canyon Park
13,Salt Corridor Regional Park
14,Ocean Breeze Park
15,Bear Brand Park
16,Laguna NIguel Regional Park
17,La Plata Park
18,Cordova Park
19,Aliso Viejo Community Park
20,Oso Creek Community Park
21,Pacific Hills Park
22,Quail Run Park
23,Rolling Hills Park
24,Marina Hills Park
25,Chapparosa Park
26,Los Rios Park
27,Descanso Park
28,Alta Laguna Park
29,Moulton Meadows Park
30,Linda Vista Park
31,Coastal Resources (Views, Beaches)

Project Site

Mission Viejo
Aliso Viejo
Ladera Ranch
Coto de Caza
Laguna Niguel
Dana Point
San Juan Capistrano
Oak Grove Elementary School
Temple Hill
Niguel Hill
Upper Buck Gully
1156 ft
Moulton Pkwy
Aliso Creek
Oso Creek
Jeronimo Rd
Tijeras
Antonio Pkwy
Cow Camp Rd
Empire Rd
Alicia Pkwy
Crown Valley Pkwy
Capistrano Beach

SOURCE: Esri 2024; USFWS NWI 2024

DUDEK

0 2,500 5,000 Feet

FIGURE 1

Scenic Resources within Five Miles of the Project Site

Compass Project

Appendix 4.13A, Scenic Resources Within 5 Miles of the Project Site

Scenic Resource	Description (approximate distance from Project site)
Sensitive Visual Resources – Built Environment	
1, Courtyard at La Paz	Located in Lagina Hills and encompassing a neighborhood shopping center with a central open, linear courtyard, the development is a designated Significant Vista Point in the Laguna Hills General Plan (City of Laguna Hills 2009). The Courtyard at La Paz is approximately 4.2 miles north of the Project site. Views to the Project site are not available.
2, Mission Basilica San Juan Capistrano	Mission San Juan Capistrano, a historic landmark and museum, was founded more than two hundred years ago as the 7th of 21 missions statewide. Originally built as a self-sufficient community by Spanish Padres and Native Americans, the Mission was a center for agriculture, industry, education and religion. This Mission is 2 miles from the Project site. Views to the Project site are not available.
3, Swanner House	The historic Swanner House, also known as the Roger Y. Williams House, is owned by the City of San Juan Capistrano and is a "significant example of an intact Craftsman Farm House" (City of San Juan Capistrano 2024). The home (located approximately 2,000 feet to the southeast of the Project site) is listed in the national Register of Historic Places by the U.S. Department of the Interior. Views to the Project site are not available.
Trails	
1, Colinas Bluff Trail	The Colinas Bluff Trail is located on the eastern slope of Colinas Ridge and can be accessed by streets within a Laguna Niguel neighborhood located at the top of the ridge located 0.3 mile to the west of the Project site. This trail offer views of northwestern San Juan Capistrano, including the Northwest Open Space. **Views to the Project site are available.**
2, West Ridge Trail	The West Ridge Trail runs north from Alta Laguna Park in the Top of the World neighborhood of Laguna Beach. The ridgeline trail is located approximately 5 miles from the Project site. Views to the Project site are not available.
3, Top of the World	A short segment of the Top of the World Trail lies just within a 5-mile study area of the Project site. The trail generally extends west from Alta Laguna Park and descends steep terrain towards Thurston Middle School in Laguna Beach. Views to the Project site are not available.
4, Lynx Trail	An approximate 0.1-mile-long segment of the Lynx Trail lies within a 5-mile study area of the Project site. It runs north and upslope from Wood Canyon Trail that is aligned within a canyon bottom. Views to the Project site are not available.
5, Mathis Canyon Trail	Mathis Canyon Trail is approximately 1.4 miles in length and runs southeast to northwest from the Wood Canyon Trail. It ends at the bottom of a ridge located approximately 3.8 miles from the Project site. Views to the Project site are not available from this hillside trail.
6, Car Wreck Trail	Car Wreck Trail is located approximately 4.2 miles from the Project site. It is approximately 0.8 mile long, and it runs southeast to northwest from Wood Canyon Trail and roughly parallels with the alignment of the nearby Mathis Canyon Trail. Views to the Project site are not available.
7, Coyote Run Trail	At its nearest point, Coyote Run Trail (which generally parallels Wood Canyon Trail) is located approximately 3.9 miles from the Project site. Views to the Project site are not available.

Appendix 4.13A, Scenic Resources Within 5 Miles of the Project Site

Scenic Resource	Description (approximate distance from Project site)
8, Rock It Trail	is the Rock It Trail roughly parallels the alignment of the nearby Coyote Run Trail and at its nearest point, is approximately 3.9 miles from Project site. Views to the Project site are not available.
9, 5 Oaks Trail	The 5 Oaks Trail runs north to south, paralleling the Coyote Run Trail, and is approximately 4.4 miles from Project site. Views to the Project site are not available.
10, Wood Canyon Trail	Wood Canyon Trail runs north to south and is one of the primary trails in Aliso and Wood Canyon Wilderness Park (several trails originate off Wood Canyon Trail). At its nearest point, the trail is approximately 3.4 miles from Project site. Views to the Project site are not available.
11, Aliso Creek Hiking and Bike Trail	The Aliso Creek Hiking and Bike Trail is approximately 4.6 miles long and generally extends north from Awma Road, along Aliso Creek, and towards Moulton Parkway. The nearest segment of the trail is located 2.9 miles from the Project site. Views to the Project site are not available.
12, Aliso Creek Trail East	Aliso Creek Trail East runs 6.3 miles, much of it parallel and just east of the Aliso Creek Hiking and Bike Trail, also approximately 2.7 miles from the Project site. Views to the Project site are not available.
13, Aswut Trail	Aswut Trail is on the westernmost portion of the 5-mile study area for the Project and runs 0.8 mile north to south from southern edge of Summet Du Monde to the northern end of Balboa Avenue, approximately 4.3 miles from the Project site. Views to the Project site are not available.
14, Meadows Trail	The Meadows Trail starts at the northern end of the Alwut Trail and runs for 1.6 miles, connecting at the Wood Canyon Trail, approximately 3.5 miles from the Project site. Views to the Project site are not available.
15, Sheep Run Trail	The Sheep Run trail runs east and north for 1.3 mile, connecting with Meadows Trail, approx. 3.7 miles from Project site. Views to the Project site are not available.
16, Arroyo Trabuco Trail - O'Neill Regional Park	The Arroyo Trabuco Trail runs along hillside, ridge, and canyon terrain and begins approximately 0.6 mile to the east of the Project site in a residential neighborhood. Located in O'Neill Regional Park, select Project components and portions of the Project site **may be visible** from hillside and ridge segments of the southern portion of the trail.
17, Patriot/Flagpole Hill Trail	The Patriot/Flagpole Hill Trail runs along a ridge approximately 3.3 miles from the southeastern boundary of the Project site, offering a northwestern view towards San Juan Capistrano. Views to the Project site **may be visible** from select ridgeline segments of the trail.
18, Trabuco Creek Trail	The Trabuco Creek Trail runs along Trabuco Creek, ending 2 miles from the southeastern boundary of the Project site (the northern extent of the trail ends at the southern terminus of Avenida De La Vista near downtown San Juan Capistrano). Views to the Project site are not available.
19, Foster/Shea Trail	A hillside trail, the Foster/Shea Trail is relatively short in length (approximately 0.7 mile long), located 1.3 miles to the south of the Project site, and connects the nearby Colinas Ridge Trail with the Oso Ranch Trail. **Views to the Project site may be available.**

Appendix 4.13A, Scenic Resources Within 5 Miles of the Project Site

Scenic Resource	Description (approximate distance from Project site)
20, Colinas Ridge Trail	Located over 0.5 mile to the southwest of the Project site, the Colinas Ridge Trail is located on the eastern slope of Colinas Ridge and is situated to the west of the Northwest Open Space. The ridge trail abuts mostly undeveloped hillsides to the east and single-family residential neighborhoods to the west. **Views to the Project site are available.**
21, Salt Creek Trail	Salt Creek Trail begins near Ridgeway Avenue and generally runs parallel to Niguel Road in a northeasterly direction for approximately 2.75 miles, terminating near Orange County Fire Authority Station #49 and Laguna Niguel Pooch Park. The northern terminus of the trail is located approximately 1.6 miles southwest from the Project Site. Views to the Project site are not available.
22, Oso Rancho Trail	The Oso Rancho Capistrano Trail runs north to south along the foothills of Colinas Ridge and crosses through the center of the Project site. **Views to the Project site are available.**
23, Peppertree Bend Trail	The Peppertree Bend Trail parallels Peppertree-Bend (a neighborhood road) and Avenida De Sacrama Lane and descends hilly terrain, ultimately connecting with the Oso Rancho Trail. At its nearest location, the trail is approximately 1.5 miles to the south of the Project site. Views to the Project site are not available.
24, San Juan Creek Trail	The San Juan Creek Trail is approximately 2.2 miles in length, runs north to south, and connects to Trabuco Creek Trail, 2.9 miles from the southern boundary of the Project site. Views to the Project site are not available.
25, Las Ramblas Trailhead	The Las Ramblas Trail is approximately 1.6 miles in length, located in the Reservoir Canyon neighborhood and near the northern terminus of Camino Las Ramblas. Accessible from a formal trailhead and nearby parking/staging area, the trail extends north and then east and west, and at its closest point is approximately 3.8 miles from the Project site. From its elevated ridge locations, **views to the Project site may be available.**
26, Los Mares Trail	The Los Mares Trail connects to Las Ramblas Trail and is an approximately 1.2-mile-long loop north of Camino Los Mares in the hill of southeast San Juan Capistrano. At its nearest point, the trail is approximately 4.1 miles southeast of the Project site. **Views to the Project site may be available from select ridgeline segments of the trail.**
27, Prima Deshecha Trail	The Prima Deschecha Trail extends north for 1.3 miles from Las Ramblas Trail and is approximately 3.4 miles from the southern boundary of the Project site. **Views to the Project site may be visible from ridgeline segments of the trail.**
28, Jeep Trail	The Jeep trail is located approximately 1 mile northeast of the Project site in the canyon to the north of Crown Valley Parkway (east of Marguerite Parkway). The trail is approximately 1.7 miles in length. Views to the Project site are not available.
29, W. La Rhonda Trail	The West La Rhonda Trail is approximately 0.5 mile in length and is situated atop a ridge south of State Route 74 and east of La Novia Avenue, approximately 3 miles to the southeast of the Project site. **Views to the Project site are available from select ridge locations along the trail.**

Appendix 4.13A, Scenic Resources Within 5 Miles of the Project Site

Scenic Resource	Description (approximate distance from Project site)
30, Entrada Trail	The Entrada Trail begins 3.2 miles southeast of the Project site and off Via Entrada and extends for 0.5 miles before ending at Calle Pinon cul-de-sac in a nearby residential neighborhood. **Views to the Project site may be available from a very short (i.e., less than 100 foot) segment of the trail.**
31, Helicopter Hill/ Malaspina Trail	The Helicopter Hill/ Malaspina Trail trailhead is located 1.1 miles to the southeast of the Project site at Malaspina Road (approximately 0.25 mile east of Interstate 5) and ends near Hillside Terrace and fairways of the Marbella Country Club. is the trail is approximately 0.9 mile long and is situated atop hillside and ridgeline terrain. **Views to the Project site may be visible from several ridgeline segments of the trail.**
32, Stone Ridge Trail	The Stone Ridge Trail is a 0.3-mile-long extension of the Helicopter Hill/ Malaspina Trail, offering a path to the north towards Mission Hills Drive. Located approximately 1.35 miles to the southeast of the Project site, this trail does not offer views to the Project site.
33, Nature Trail	The Nature Trail is approximately 0.6 mile long, and connects the Mathis Canyon Trail to the middle of the Coyote Run Trail. At its nearest point, the Nature Trail is approximately 3.9 miles from the Project site. Views to the Project site are not available.
Scenic Overlooks	
1, Canyon Overlook	The Canyon Overlook is located along the Rock-It Trail and offers scenic canyon views and views extending to local neighborhood to the southeast. Views to the Project site are not available.
2, Moulton Peak	Moulton Peak is located at the top of the 5 Oaks Trail, next to water storage infrastructure, and offers views are of the nearby canyons and neighborhoods to the southeast. Views to the Project site are not available.
3, Alwut Overlook	The Alwut Overlook is located on a ridge the Vermilion Cliffs cul-de-sac in Aliso Viejo. Overlook views are to the southwest and include the canyon and ridge terrain in Aliso and Woods Canyon Wilderness Park. Views to the Project site are not available from this overlook.
4, Scenic Overlook[1]	An unnamed scenic overlook is located along a trail that runs parallel with the Coronado Pointe roadway. Views extend east to canyons and ridges within the wilderness park. Views to the Project site are not available.
5, Top of the World	Top of the World is an overlook located at the Top of the World Trailhead, north of Alta Laguna Boulevard and adjacent to Alta Laguna Park. Views are of the neighborhood to the south and Aliso and Woods Canyon Wilderness Park ridgelines and canyons to the east. Views to the Project site are not available from this location.
6, Scenic Overlook[1]	An unnamed scenic overlook is located off of Talavera Drive and views extend north to ridgelines and canyons within the wilderness park as well as residential neighborhoods. Views to the Project site are not available.
7, Scenic Overlook[1]	An unnamed scenic overlook is located at the intersection of the Aswut and Meadows trails, offering elevated vantage point views of the wilderness park and distant views of residences to the north. Views to the Project site are not available.

Appendix 4.13A, Scenic Resources Within 5 Miles of the Project Site

Scenic Resource	Description (approximate distance from Project site)
8, Aliso Peak	Aliso Peak is located above Ceanothus Drive in Laguna Beach. The elevated vantage point offers views of the neighborhoods and the Pacific Ocean to the west and canyon and ridge landscape to the north/northeast. Views to the Project site are not available.
Scenic Routes/Highways	
1, Oso Parkway	From Alicia Parkway to State Route 241, Oso Parkway is a designated as a Landscape Corridor in the Orange County General Plan Scenic Highway Plan (Orange County 2004). Landscape corridors traverses developed or developing areas and have been designated for special treatment to provide a pleasant driving environment as well as community enhancement (Orange County 2004). As its nearest point, Oso Parkway is approximately 2.8 miles to the north of the Project site. Views to the Project site are not available.
2, La Paz Road	From Crown Valley Parkway north to Paseo De Valencia, La Paz Road is an Orange County and City of Laguna Hills designated Landscape Corridor. As its nearest point, Oso Parkway is approximately 1.8 miles to the west of the Project site. Views to the Project site are not available.
3, Alicia Parkway	From Aliso Creek Road in Laguna Niguel north to Paseo De Valencia in Laguna Hills, Alicia Parkway is a County designated Landscape Corridor. As its nearest point, Alicia Parkway is approximately 2.7 miles to the northwest of the Project site. Views to the Project site are not available.
4, Niguel Road	From Highway 1 in Dana Point north to Crown Valley Parkway in Laguna Niguel, Niguel Road is a County designated Landscape Corridor. As its nearest point, Niguel Road is approximately 1.9 miles to the southwest of the Project site. Views to the Project site are not available.
5, Crown Valley Parkway	From Highway 1 in Dana Point north to Interstate 5 in Mission Viejo, Crown Valley Parkway is a County designated Landscape Corridor. As its nearest point, Crown Valley Parkway is approximately 1 mile to the northwest of the Project site. Views to the Project site are not available.
6, Moulton Parkway/Golden Lantern	From Highway 1 through the Project's 5-mile study area, Moulton Parkway/Golden Lantern is an Orange County and City of Laguna Hills designated Landscape Corridor. As its nearest point, Moulton Parkway/Golden Lantern is approximately 0.35 miles to the west of the Project site. Views to the Project site are not available.
7, Camino Del Avion	From Crown Valley Parkway east to Del Obispo Street, Camino Del Avion is a County designated Landscape Corridor. As its nearest point, Camino Del Avion is approximately 3 miles to the south of the Project site. Views to the Project site are not available.
8, Del Obispo Street	From Highway 1 north to Camino Del Avion, Del Obispo Street is a County designated Landscape Corridor. As its nearest point, Del Obispo Street is approximately 3 miles to the south of the Project site. Views to the Project site are not available.
9, Antonio Parkway	From State Route 74 north through the Project's 5-mile study area, Antonio Parkway is a County designated Landscape Corridor. As its nearest point, Antonio Parkway is approximately 2.9 miles to the east of the Project site. Views to the Project site are not available.
10, Cow Camp Road	From Anotnio Parkway east towards the Rienda at Mission Viejo development, Cow Camp Road is a County designated Landscape

Appendix 4.13A, Scenic Resources Within 5 Miles of the Project Site

Scenic Resource	Description (approximate distance from Project site)
	Corridor. As its nearest point, Cow Camp Road is approximately 2.9 miles to the east of the Project site. Views to the Project site are not available.
11, Wood Canyon Drive	Woods Canyon Drive is a designated Viewscape Corridor (City of Aliso Viejo 2003). Pursuant to the Aliso Viejo General Plan, a viewscape corridor is route that traverses a corridor within which unique or unusual scenic resources and aesthetic values are found. Wood Canyon Drive is located 2.8 miles to the northwest of the Project site. Views to the Project site are not available.
12, Interstate 5 – Eligible State Scenic Highway	Interstate 5 is an Eligible State Scenic Highway from Coronado (San Diego County) to State Route 74 near San Juan Capistrano (Caltrans 2024). At State Route 74, Interstate 5 is located approximately 2.25 miles to the southeast of the Project site. Views to the Project site are not available.
13, State Route 74 - Eligible State Scenic Highway	State Route 74 is an Eligible State Scenic Highway from Interstate 5 to Route 111 near Palm Springs (Caltrans 2024). At Interstate 5, State Route 74 is located approximately 2.25 miles to the southeast of the Project site. Views to the Project site are not available.
14, Highway 1 - Eligible State Scenic Highway	Highway 1 is an Eligible State Scenic Highway from Interstate 5 in San Juan Capistrano to Lakewood Boulevard in Long Beach (Caltrans 2024). As measured from the interstate of Crown Valley Parkway and Highway 1, Highway is located 4.2 miles to the southwest of the Project site. Views to the Project site are not available.
Parks/Coastal Resources	
1, Aliso and Woods Canyon Wilderness Park	Comprised of approximately 4,500 acres of wilderness and natural open space lands, Aliso and Woods Canyon Wilderness Park includes (among other recreational amenities) two year round streams, picnic areas, scenic overlooks, and over 30 miles of official trails (OC Parks 2024b). The wilderness park is located as close as 2.6 miles to the west of the Project site. Views to the Project site are not available.
2, Mendocino Park	A neighborhood park featuring a playground, large turf area, and paved pathway, Mendocino Park is located off Aliso Hills Drive in Laguna Hills. The park is located approximately 3.85 miles to the northwest of the Project site. Views to the Project site are not available.
3, Mandeville Park	Bordered by single-family residential neighborhoods and the Moulton Niguel Water District headquarters, Mandeville Park is a small circular park located near La Paz Road with access available from Mandeville Drive and Rio Grande Avenue. The park is located 3.5 miles to the northwest of the Project site. Views to the Project site are not available.
4, Moulton Ranch Park	Featuring a playground, large turf areas, and perimeter concrete path, Moulton Ranch Park is located off public roads in a single-family residential neighborhood. The park is located 3 miles to the north of the Project site atop elevated terrain just west of Interstate 5. Views to the Project site are not available.
5, Northwest Open Space	Northwest Open Space is located approximately 0.4 miles from the southeastern boundary of the Project site and is recognized for its historical value as the “mother village” for the Juaneño people of the San Juan Capistrano Valley. **Based on proximity, views from areas within**

Appendix 4.13A, Scenic Resources Within 5 Miles of the Project Site

Scenic Resource	Description (approximate distance from Project site)
	the boundary of the Northwest Open Space to the project site may be available.
6, Treasure Island Park	A coastal park offering turf areas, benches, and ocean views, Treasure Island Park sits atop an underground parking garage in Laguna Beach. The park is located approximately 4.65 miles to the southwest of the Project site. Views to the Project site are not available.
7, Lang Park	Located across Coast Highway from Treasure Island Park, Lang Park is a traditional park featuring turf area, playgrounds, basketball and tennis courts, and a community center. The park is located approximately 4.6 miles to the southwest of the Project site. Views to the Project site are not available.
8, Village Green Park	Featuring a fenced playground, Laguna Green Park is located in South Laguna and features climbing equipment and turf areas. The park is located approximately 4.3 miles to the southwest of the Project site. Views to the Project site are not available.
9, Salt Creek Beach Bluff Park	A coastal park overlooking the ocean and nearby Salt Creek Beach in Dana Point, Salt Creek Beach Bluff Park features large grassy areas, picnic shelters, a basketball court, and concrete paths. The park is located approximately 4.6 miles to the southwest of the Project site. Views to the Project site are not available.
10, Sea Terrace Community Park	Located across Highway 1 from Salt Creek Beach Bluff Park, Sea Terrace Community Park is situated near Dana Point Library and the Monarch Beach Golf Course. The park offers picnic tables and barbeques and links up with the Salt Creek Bike Trail and Salt Creek Beach Park through a tunnel under Pacific Coast Highway. The park is located approximately 4.5 miles to the southwest of the Project site. Views to the Project site are not available.
11, Dana Crest Park	A small neighborhood park with large grassy areas, a playground, picnic tables and a basketball court, Dana Crest Park is bordered by single-family residences on all sides. The park is located approximately 3.6 miles to the southwest of the Project site. Views to the Project site are not available.
12, Sea Canyon Park	Located within 1,000 feet of nearby Dana Crest Park, Sea Canyon Park features large grassy areas, a dog run, picnic tables and a picnic shelter, trees, playgrounds, and concrete paths. The park is located approximately 3.7 miles to the southwest of the Project site. Views to the Project site are not available.
13, Salt Corridor Regional Park	A mostly undeveloped, natural, canyon park in Laguna Niguel, Salt Corridor Regional Park features a up and down trail amongst native vegetation located west of Niguel Road. The park is located approximately 2.6 miles to the southwest of the Project site. Views to the Project site are not available.
14, Ocean Breeze Park	Located in a single-family residential neighborhood near John Malcom Elementary School, Ocean Breeze Park features playground, trees and landscaping, grassy areas, a central gazebo, and a basketball court. The park is located approximately 3.1 miles to the southwest of the Project site. Views to the Project site are not available.

Appendix 4.13A, Scenic Resources Within 5 Miles of the Project Site

Scenic Resource	Description (approximate distance from Project site)
15, Bear Brand Park	A developed sports park featuring a large soccer field, baseball/softball fields, playground, concrete paths, and parking area, Bear Brand Park is located southeast of Ocean Breeze Park. The park is located approximately 3 miles to the southwest of the Project site. Views to the Project site are not available.
16, Laguna Niguel Regional Park	A large regional park with a vehicle entry fee, Laguna Niguel Regional Park includes large grassy areas, trails, picnic facilities, parking lots, and a 44-acre lake that is regularly stocked with fish (public fishing is permitted). The park is located approximately 1.5 miles to the west of the Project site. Views to the Project site are not available.
17, La Plata Park	A small neighborhood park featuring a grassy area and playground. La Plata Park is completely surrounded by residences. The park is located approximately 0.8 mile to the west of the Project site. Views to the Project site are not available.
18, Cordova Park	A neighborhood park featuring a large grassy area, trees, native vegetation, playgrounds, beach volleyball court, The park is located approximately 2.7 miles to the northeast of the Project site. Views to the Project site are not available.
19, Aliso Viejo Community Park	Featuring multiple lighted baseball/softball and soccer fields (in addition to several playgrounds and a covered picnic shelter), Aliso Viejo Community Park is located 3.65 miles to the northwest of the Project site. Views to the Project site are not available.
20, Oso Creek Community Park	Featuring large grassy areas, lighted ball fields, and a playground, Oso Creek Park is located 4.5 miles to the northeast of the Project site. Views to the Project site are not available.
21, Pacific Hills Park	Offering a large grassy area surrounded by mature trees and residences, Pacific Hills Park includes playgrounds, a basketball court, and concrete paths. The park is located approximately 4.7 mile to the northeast of the Project site. Views to the Project site are not available.
22, Quail Run Park	A neighborhood park featuring grassy area, a beach volleyball court, playgrounds, basketball court, concrete paths, and a parking lot, Quail Run Park is located approximately 4.4 mile to the northeast of the Project site. Views to the Project site are not available.
23, Rolling Hills Park	A neighborhood park featuring a public pool, basketball and tennis courts, grassy areas, concrete paths, and a playground, Rolling Hills Park is located approximately 3.5 miles to the northwest of the Project site. Views to the Project site are not available.
24, Marina Hills Park	Marina Hills Park includes six tennis courts, a playground, softball/football field, soccer fields, and basketball and bocce courts. The park (located in a residential neighborhood) is approximately 1.5 miles to the southwest of the Project site. Views to the Project site are not available.
25, Chapparosa Park	A large sports park with several lighted ball fields, Chapparosa Park also features a large playground area, picnic facilities, parks, parking lots, and basketball courts. The park is located approximately 1.6 miles to the southwest of the Project site. Views to the Project site are not available.
26, Los Rios Park	Located in downtown San Juan Capistrano near the city's train station and in a historic district, Los Rios Park features concrete paths, a dirt

Appendix 4.13A, Scenic Resources Within 5 Miles of the Project Site

Scenic Resource	Description (approximate distance from Project site)
	parking lot, and playground areas. The park is located approximately 2.3 miles to the northwest of the Project site. Views to the Project site are not available.
27, Descanso Park	A small triangular park adjacent to the San Juan Creek and Trabuco Creek Trails, Descanso Park is located 3 miles to the south of the Project site. Views to the Project site are not available.
28, Alta Laguna Park	Located off Alta Laguna Boulevard and featuring a baseball field, tennis courts, a playground, and access to ridge trails within Aliso and Woods Canyon Park, Alta Laguna Park is located approximately 4.8 miles to the northwest of the Project site. Views to the Project site are not available.
29, Moulton Meadows Park	A ridgeline park with a large grassy area, mature trees, tennis and basketball courts, playgrounds, and a perimeter path, Moulton Meadows Park is located approximately 4.3 miles to the west of the Project site. Views to the Project site are not available.
30, Linda Vista Park	A small triangular park in Mission Viejo surrounded by residences and an elementary school, Linda Vista Park is located approximately 4.2 miles to the northeast of the Project site. Views to the Project site are not available.
31, Coastal Resources (Views, Beaches)	Coastal resources (views, beaches, trails/paths) in Dana Point and Laguna Beach are located within 5 miles of the Project site. Views to the Project site are not available from the coast.

Note.

1. Unnamed scenic overlooks located in Aliso and Woods Canyon Regional Park

References

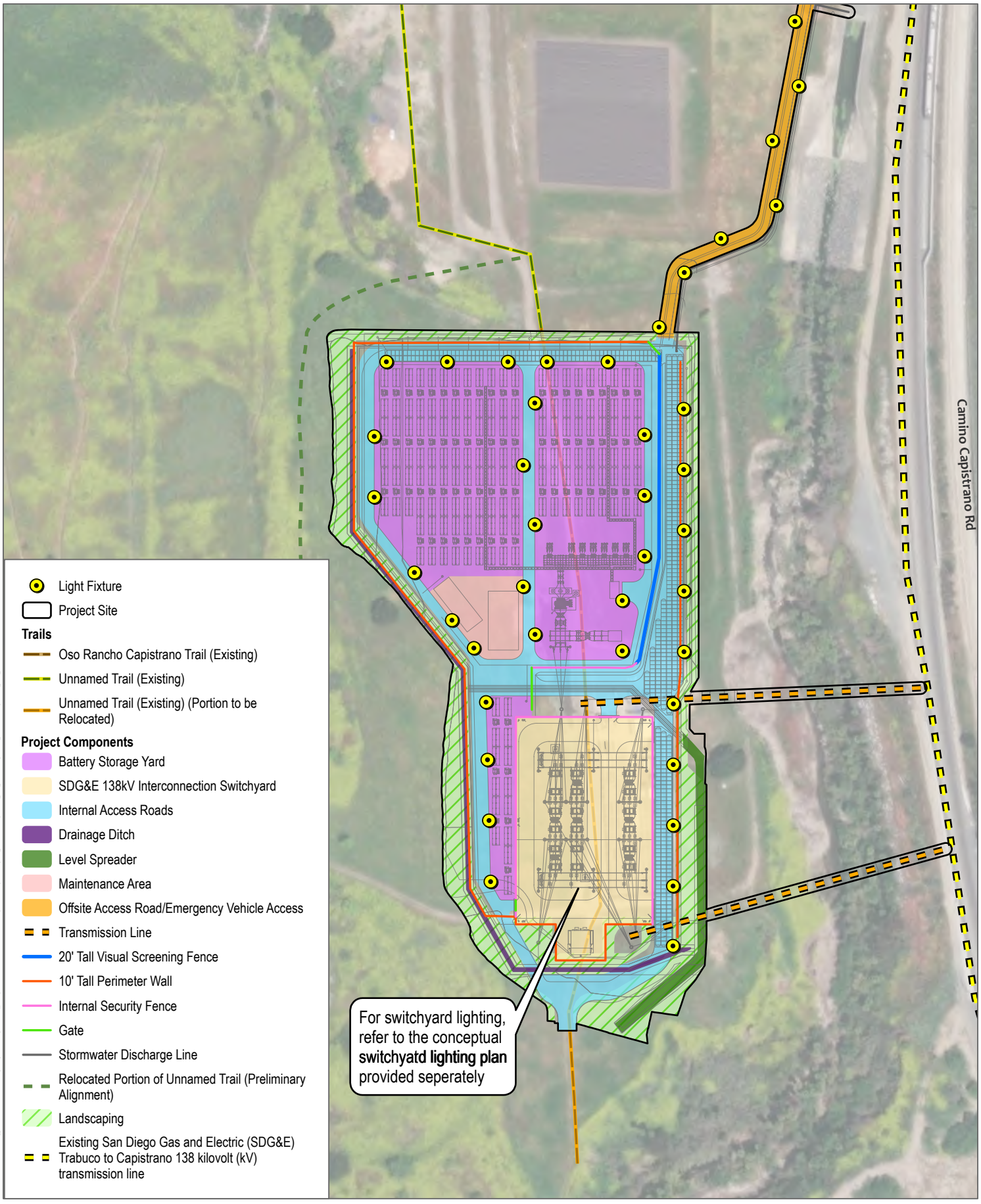
City of Aliso Viejo. 2003. General Plan Conservation/Open Space Policy Map.

City of Laguna Hills. 2009. Laguna Hills General Plan. July.

The Swanner House. 2024. “The Swanner House: About Us”. https://swannerhouse.com/about. Accessed November 20, 2024.

OC Parks. 2024. “Laguna Niguel Regional Park”. https://ocparks.com/parks-trails/laguna-niguel-regional-park. Accessed November 18, 2024.

Appendix 4.13B
Conceptual Lighting Plan



SOURCE: Maxar 2023

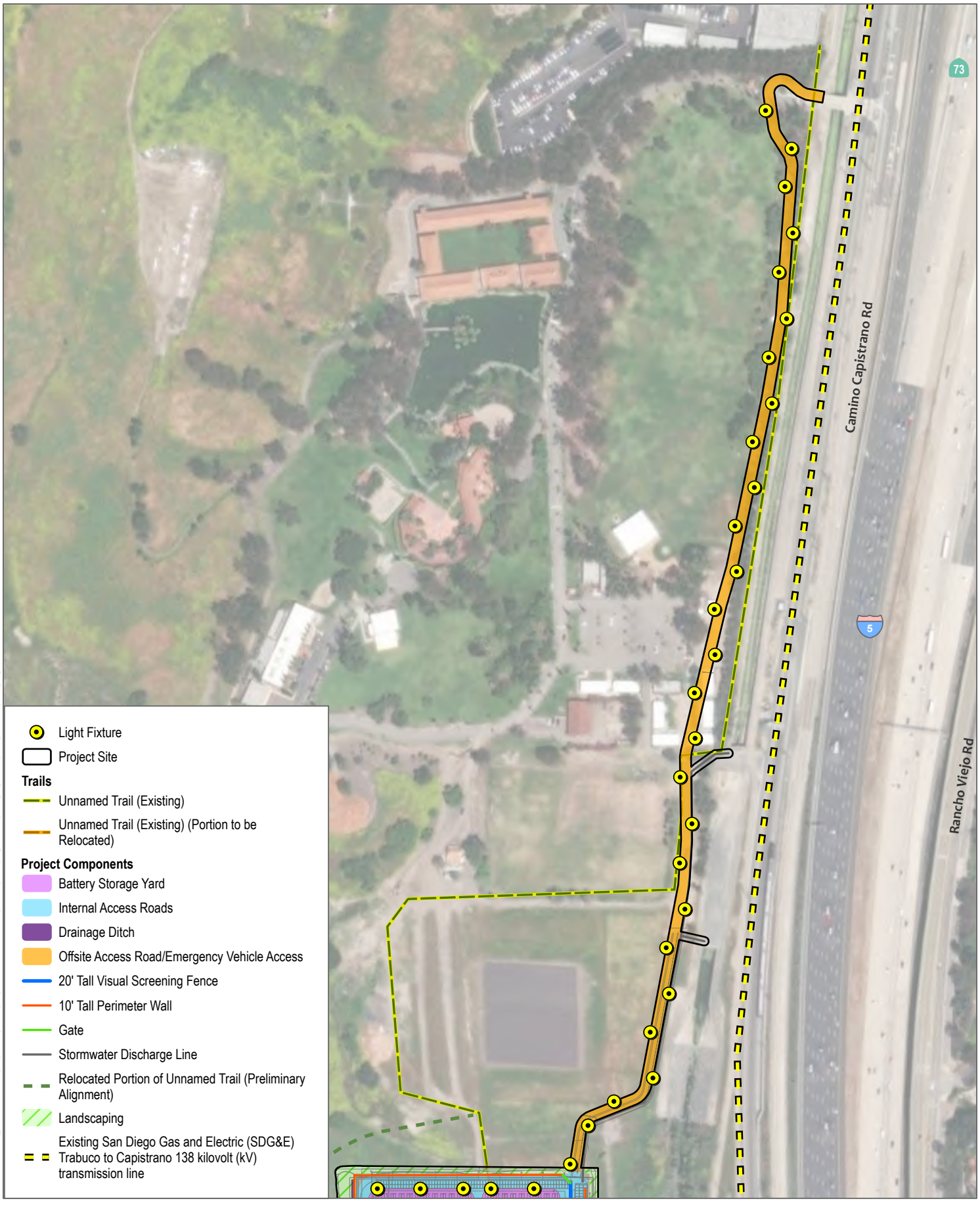
DUDEK

0 100 200 Feet

FIGURE 1.1

Conceptual Lighting Plan

Compass Energy Storage Project



SOURCE: Maxar 2023

DUDEK

0 100 200 Feet

FIGURE 1.2

Conceptual Lighting Plan

Compass Energy Storage Project

Appendix 4.13C

SDG&E Switchyard Conceptual Lighting Plan

Lighting Study Report

for

SAN DIEGO GAS & ELECTRIC

Saddleback 138 kV Switchyard

Rev. 0

Prepared by:

Electrical Consultants, Inc.
5030 Camino De La Siesta, Suite # 407
San Diego, CA 92108

Octorber 2022

"Engineering with Distinction"
ELECTRICAL CONSULTANTS, INC.

The proposed yard lighting design was analyzed to determine if San Diego Gas & Electric owned equipment will be adequately illuminated, as required by NESC 2017 Section 111 Illumination, and SDG&E Substation Lighting Requirements (SES-4301). The area analyzed consists of all areas within the switchyard security fence.

The control of the new yard lights is accomplished via lighting contactor in the control shelter. sixteen (16) new fixtures mounted on deadend structures, two (2) fixtures mounted on the wall, one (1) flood light by the truck gate, and seven (7) new fixtures lights mounted on the control shelter.

Assumptions: Sixteen (16) 6320-lumen lights will be mounted at heights allowed by the deadends (25 ft), and one (1) gate flood is mounted at (7 ft.).

In addition, total of nine (9) 10,596-lumen will be utilized. Two (2) will be mounted on the wall at (8 ft.), and seven (7) exterior control shelter lights will be mounted at (10 ft).

Calculations: The general arrangement was used as a reference to place equipment models and lights with Visual 2020, 2.11. The lights were placed and aimed to optimize usage. The software calculated the illumination levels at equipment level (5 feet).

Conclusions: The resulting iso-foot-candle plots in Attachment A indicate the proposed lighting plan, with new lights installed and aimed as indicated, will provide adequate illumination for equipment in the yard and approximately 0.5 foot-candles in walkway areas.

Attachment A: Visual 2020 Saddleback Switchyard Lighting Model
Attachment B: Yard Lighting Cutsheet
Attachment C: Wall & Control Shelter Lighting Cutsheet
Attachment D: Flood Light Specs
Attachment E: Flood Light Fixture

QA/QC Review and Sign-Off:

Task	*Responsible Individual*		*Date*
Prepared	*Mustafa Alhashimy*	*MA*	*10/13/2022*
Reviewed	*Armando Flores*	*AF*	*10/18/2022*
Issued	*Aaron M. Kinnee*	*AMK*	*12/12/2022*

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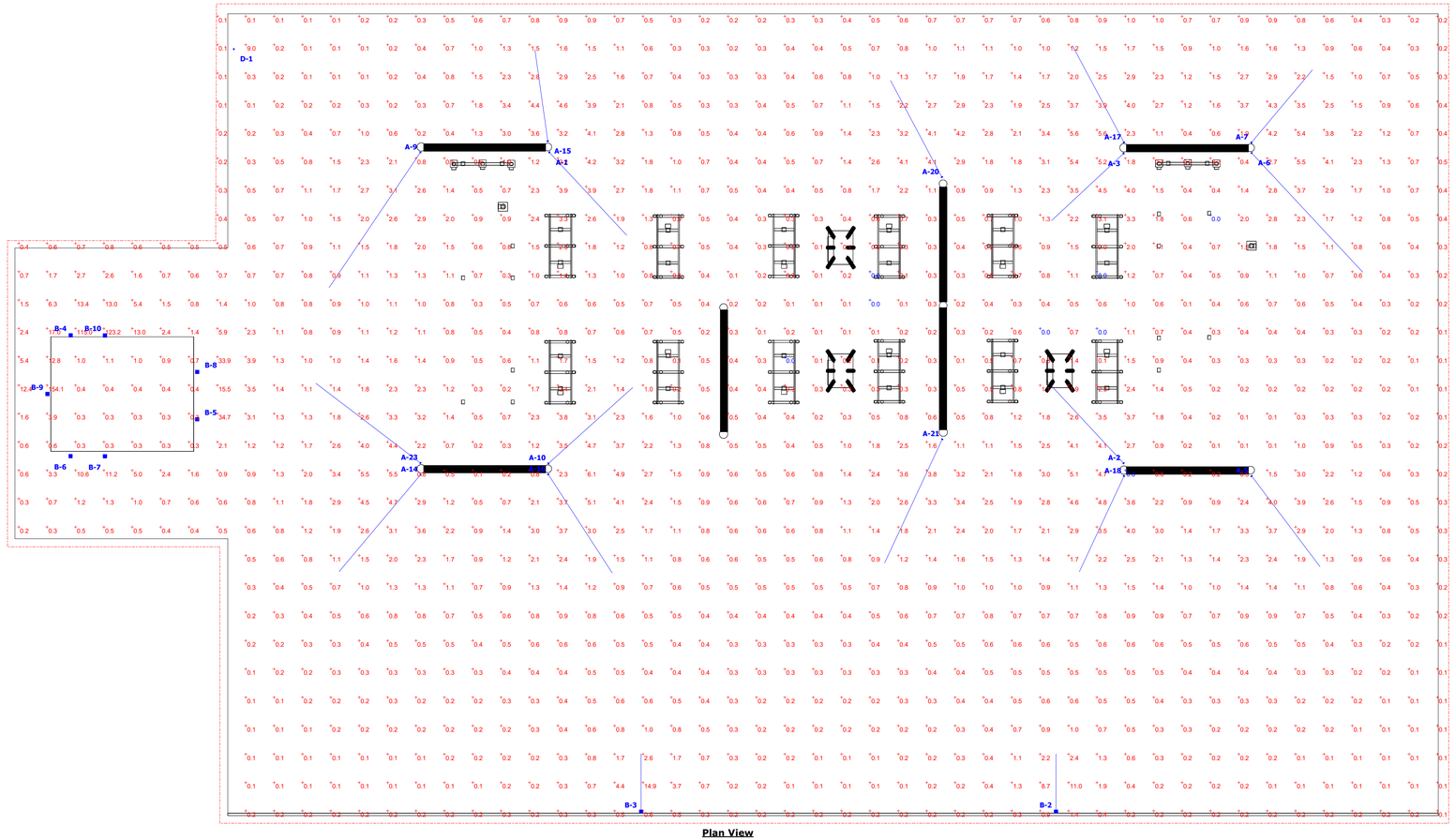
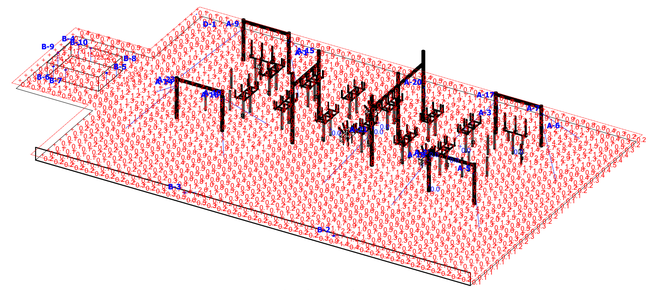


Plan View
Scale - 1" = 20ft



South East View

Attachment A

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #2	+	1.5 fc	154.1 fc	0.0 fc	N/A	N/A

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Number Lamps	Filename	Lamp	Lumens Per Lamp	Light Loss Factor	Wattage
	A	16	RAB LIGHTING INC.	PIP45Y/D10	CAST FINNED METAL HEAT SINK, MOLDED TEXTURED PLASTIC REFLECTOR WITH SEMI-DIFFUSE FINISH, 1 CIRCUIT BOARD WITH 60 LEDS, CLEAR MICRO-PRISMATIC GLASS LENS IN CAST WHITE PAINTED METAL FRAME.	60	496e99bea53f6b006b7d1ccd4fa0e547.ies	SIXTY WHITE LIGHT EMITTING DIODES (LEDS), AIMED AT THE HORIZON.	Absolute	1	49.3
	B	9	RAB LIGHTING INC.			1	dlf2008106-5a.ies		10596	1	86.8513
	D	1	Cree Lighting	PAR38-90W-B2-30K-E26-U2	PAR38CREE BASIC 3000K	1	PAR38-90W-B2-30K-E26-U2_PL15916-001A.ies	UNKNOWN	1115	1	10.5

Luminaire Locations

		Location						Aim		
No.	Label	X	Y	Z	MH	Orientation	Tilt	X	Y	Z
2	A	370.37	242.33	25.00	25.00	317.00	52.00	348.55	265.74	0.00
3	A	370.36	329.65	25.00	25.00	227.00	48.00	350.05	310.71	0.00
5	A	406.47	238.73	25.00	25.00	143.00	52.00	425.73	213.17	0.00
6	A	406.47	329.80	25.00	25.00	137.00	61.50	437.87	296.12	0.00
7	A	406.39	332.73	25.00	25.00	40.00	47.00	423.62	353.26	0.00
9	A	172.09	329.97	25.00	25.00	214.00	61.50	146.34	291.79	0.00
10	A	208.20	242.27	25.00	25.00	48.00	52.00	231.97	263.68	0.00
14	A	172.13	239.10	25.00	25.00	220.00	55.00	149.18	211.75	0.00
15	A	208.02	333.15	25.00	25.00	352.00	46.00	204.41	358.79	0.00
16	A	208.13	239.20	25.00	25.00	147.00	53.01	226.21	211.37	0.00
17	A	370.45	332.78	25.00	25.00	332.00	51.00	355.96	360.04	0.00
18	A	370.49	238.73	25.00	25.00	205.00	50.00	357.90	211.72	0.00
20	A	319.14	323.00	25.00	25.00	332.00	51.00	304.65	350.26	0.00
21	A	319.24	249.10	25.00	25.00	205.00	57.00	302.97	214.21	0.00
23	A	172.11	242.39	25.00	25.00	307.29	56.00	142.63	264.85	0.00
2	B	351.31	144.39	7.47	8.00	0.00	65.00	351.31	160.41	0.00
3	B	234.32	144.39	7.47	8.00	0.00	65.00	234.32	160.41	0.00
4	B	73.52	278.39	10.00	10.00	0.00	0.00	73.52	278.39	0.00
5	B	109.17	254.73	10.00	10.00	0.00	0.00	109.17	254.73	0.00
6	B	73.45	244.34	10.00	10.00	0.00	0.00	73.45	244.34	0.00
7	B	83.14	244.30	10.00	10.00	0.00	0.00	83.14	244.30	0.00
8	B	109.18	268.05	10.00	10.00	0.00	0.00	109.18	268.05	0.00
9	B	66.96	261.85	10.00	10.00	0.00	0.00	66.96	261.85	0.00
10	B	83.14	278.36	10.00	10.00	0.00	0.00	83.14	278.36	0.00
1	D	119.49	359.08	7.00	7.00	90.00	35.00	119.49	359.08	7.00
1	A	208.45	329.98	25.00	25.00	137.00	52.00	230.27	306.58	0.00

ESI ELECTRICAL CONSULTANTS, INC.
"Engineering with Distinction"

Saddleback Switchyard
Lighting Study

Designer
MA
Date
10/13/2022
Scale
Not to Scale
Drawing No.

Summary

Attachment B

PIP45Y/D10

The low-cost floodlight family just upped its game. PIP™ - now up to 45W of affordable LED light.

Color: Bronze

Weight: 4.6 lbs

Project:	Type:
Prepared By:	Date:

Driver Info		LED Info	
Type:	Constant Current	Watts:	45W
120V:	0.42A	Color Temp:	3000K
208V:	0.26A	Color Accuracy:	71 CRI
240V:	0.22A	L70 Lifespan:	60000
277V:	0.19A	Lumens:	6320
Input Watts:	49W	Efficacy:	128 LPW
Efficiency:	91%		

Technical Specifications

Listings

UL Listing:

Suitable for wet locations. Suitable for ground mounting.

DLC Listed:

This product is listed by Design Lights Consortium (DLC) as an ultra-efficient premium product that qualifies for the highest tier of rebates from DLC Member Utilities.
DLC Product Code:PFN61EHQ

IESNA LM-79 & LM-80 Testing:

RAB LED luminaires have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80, and have received the Department of Energy "Lighting Facts" label.

Electrical

Driver:

Constant Current, Class 2, 50/60 Hz, 2kV, 120 - 277VAC 120: 0.42A, 208V: 0.26A, 240V: 0.22A, 277V: 0.19A

Dimming Driver:

Driver includes dimming control wiring for 0-10V dimming systems. Requires separate 0-10V DC dimming circuit. Dims as low as 10%.

THD:

11.7% at 120V, 14.6% at 277V

Power Factor:

99.0% at 120V, 93.9% at 277V

Surge Protection:

+/- 1kV line to line (differential mode)/ +/- 2kV line to common mode ground (tested to secondary ground) on AC power port, +/- 0.5 kV for outdoor cables

LED Characteristics

LEDs:

Long-life, high-efficiency surface mounting LEDs

Lifespan:

60,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations.

Color Uniformity:

RAB's range of CCT (Correlated Color Temperature) follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2015.

Optical

NEMA Type:

7H x 6V Beam Spread.

Construction

IP Rating:

Ingress Protection rating of IP66 for dust and water

Maximum Ambient Temperature:

Suitable for use in 104° F (40°C) ambient temperatures

Cold Weather Starting:

Minimum starting temperature is -40° F (-40° C)

Housing:

Precision die-cast aluminum housing and mounting arm

Lens:

Frosted acrylic lens with built-in optics

Mounting:

Mounting arm with "O" ring seal, seal plug and stainless steel screw.

Gaskets:

High temperature silicone gaskets.

Green Technology:

Mercury and UV free. RoHS compliant components. Polyester powder coat finish formulated without the use of VOC or toxic heavy metals.

Finish:

Formulated for high-durability and long lasting color.

Other

5 Yr Limited Warranty:

RAB warrantees fixture operation and paint finish for a period of 5 years.

Country of Origin:

Designed by RAB in New Jersey and assembled in the USA by RAB's IBEW Local 3 workers.

Buy American Act Compliant:

This product is a COTS item manufactured in the United States, and is compliant with the Buy American Act.

Recovery Act (ARRA) Compliant:

This product complies with the 52.225-21 "Required Use of American Iron, Steel, and Manufactured Goods-- Buy American Act-- Construction Materials (October 2010).

Trade Agreements Act Compliant:

This product is a COTS item manufactured in the United States, and is compliant with the Trade Agreements Act.

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W34-90L-830

Attachment C

RAB

Ultra-economy wall pack with traditional look.

Color: Bronze

Weight: 10.4 lbs

Project:	**Type:**
Prepared By:	**Date:**

Driver Info

Type	Constant Current
120V	0.73A
208V	0.42A
240V	0.36A
277V	0.32A
Input Watts	86.9W

LED Info

Watts	86W
Color Temp	3000K (Warm)
Color Accuracy	84 CRI
L70 Lifespan	50,000 Hours
Lumens	10,596
Efficacy	121.9 lm/W

Technical Specifications

Compliance

UL Listed:

Suitable for wet locations. Suitable for mounting within 4 feet of the ground.

DLC Listed:

This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities.
DLC Product Code: PB2E71YC

Performance

Lifespan:

50,000-Hour LED lifespan based on IES LM-80 results and TM-21 calculations

Other

Note:

All values are typical (tolerance +/- 10%)

Replacement:

Replaces up to 320W Metal Halide

Equivalency:

Equivalent to 250 Watt Metal Halide

5 Yr Limited Warranty:

The RAB 5-year, limited warranty covers light output, driver performance and paint finish. RAB's warranty is subject to all terms and conditions found at rablighting.com/warranty.

Trade Agreements Act Compliant:

This product is a product of Cambodia and a "designated country" end product that complies with the Trade Agreements Act

Buy American Act Compliance:

RAB values USA manufacturing! Upon request, RAB may be able to manufacture this product to be compliant with the Buy American Act (BAA). Please contact customer service to request a quote for the product to be made BAA compliant.

LED Characteristics

LEDs:

Long-life, high-efficacy, surface-mount LEDs

Color Uniformity:

RAB's range of Correlated Color Temperature follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2017.

Construction

Housing:

Die-cast aluminum

Lens:

Glass

Reflector:

Specular aluminum

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PAR38 Series

Cree Lighting Basic Series LED Lamps

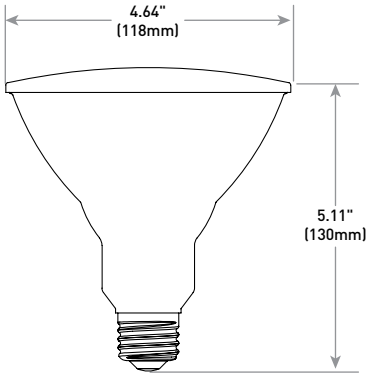
Attachment D

Rev. Date: V5 09/28/2020

Product Description

The new Cree Lighting Basic lamp series combines performance, quality and value making it the right choice for general lighting applications. The ENERGY STAR certified Cree Lighting Basic Series LED PAR38 lamp is ideal for use indoors in a track fixture or recessed can, or outdoors in security or landscape lighting. Delivering up to 950 lumens of 3000K light, this PAR38 lamp is available in the 40° flood beam angle.

90W



Performance Summary

- **Beam Angle:** 40° Flood
- **Lamp Delivered Light Output:** 950 lumens
- **Input Power:** 60W Replacement: 11 watts
- **CRI:** >80
- **CCT:** 3000K
- **Limited Warranty†:** 3 years Commercial use
- **Lifetime:** Designed to last at least 15,000 hours
- **Dimming:** Dimmable to 10% with select dimmers
- ENERGY STAR® Certified
- Lamps Suitable For Enclosed Fixtures
- Offered in 2-Lamp Packs (Master Carton Quantity = (8) 2-Lamp Packs)

† See http://creelighting.com/warranty for warranty terms

Ordering Information

Example: PAR38-90W-B2-30K-E26-U2

PAR38	90W	B2	30K			E26		U2
Product	**Watt Equivalent**	**Series**	**CCT**	**Beam Angle**	**Voltage**	**Base**	**CRI**	**Packaging**
PAR38	**90W** 90 Watt, 950 Lumens	**B2** Basic Series, 2nd Generation	**30K** 3000K	**Blank** 40° Flood	**Blank** 120 Volt	**E26** E26 (screw base)	**Blank** >80	**U2 2-Lamp Pack** Master Carton Quantity = (8) 2-Lamp Packs

US: creelighting.com (800) 236-6800
Canada: creelighting-canada.com (800) 473-1234

Product Specifications

CONSTRUCTION & MATERIALS

- PAR38 90W design weighing 7.8 ounces (221g)
- E26 Medium standard screw type base
- Bulb meets ANSI standards for PAR38 dimensions
- Mercury free
- **Dimensions:** 8.7" H x 6.2" W x 5.0" D (2-Lamp Pack); 9.6" H x 13.1" W x 20.9" D (Master Carton)

OPTICAL SYSTEM

- Plastic lens offers increased optical spread

ELECTRICAL SYSTEM

- **Power Factor:** > 0.9 nominal
- **Input Voltage:** 120V, 60Hz
- **Dimming:** Dimmable to 10% with select dimmers. Visit creelighting.com/dimming for additional details
- **Operating Temperature Range:** -25°C - +40° C (-13°F - + 104°F)

REGULATORY & VOLUNTARY QUALIFICATIONS

- cULus Listed
- Suitable for wet locations where exposed directly to weather
- Suitable for use in enclosed light fixtures. Lifetime may be reduced if used in air tight enclosures or in insulated ceiling air tight (ICAT) recessed downlight enclosures
- Meets FCC Part 15, Subpart B, Class B limits for conducted and radiated emissions
- ENERGY STAR® Certified. Please refer to www.energystar.gov/productfinder/product/certified-light-bulbs/results for most current information
- RoHS compliant. Consult factory for additional details
- **CA RESIDENTS WARNING:** Cancer and Reproductive Harm – www.p65warnings.ca.gov

Packaging

2-Lamp Pack; Master Carton Quantity = (8) 2-Lamp Packs

Ordering Number	Two-Lamp Pack UPC	Description	Bulb Type	Watts	CCT	Two-Lamp Packs per Master Carton	Master Carton ITF-14	Total Lamps per Master Carton	Master Cartons per Pallet Qty	CRI	Lumens	Rated Life (Hrs)
PAR38-90W-B2-30K-E26-U2	849665042136	90W Bright White 40° Flood, PAR38 Equivalent	PAR38	11	3000K	8	10849665042133	16	24	>80	950	15,000

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US: creelighting.com (800) 236-6800
Canada: creelighting-canada.com (800) 473-1234

CREE LIGHTING
A COMPANY OF *IDEAL INDUSTRIES, INC.*

Orbit Industries, Inc.

Attachment E

Catalog No.:_____

Job/Title:_____

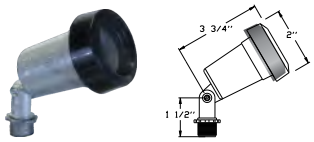
Notes: _____

SPECIFICATION & FEATURES

LAMP HOLDERS

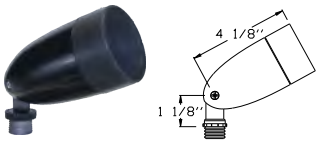
FEATURES:

- Die Cast Aluminum & Zinc
- 120V
- PAR38 (90W Max.) (Except QR100)



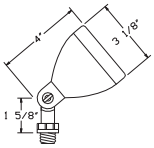
LH150-SG

Includes Premium Silicon Gasket



LH90

QR100

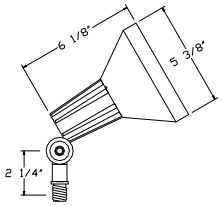


CERTIFICATION:

File E303572

Listed

Wet Location



HL2

CONFIGURATION DATA:

Part No.					Description	Std.Pkg.
Gray	Bronze	Black	White	Green		
LH150-SG-GY	LH150-SG-BR	LH150-SG-BK	LH150-SG-W	-	Lampholder with Premium Silicon Outer Gasket	25
LH90-GY	-	-	LH90-WH	-	Premium Lampholder	25
HL2-GY	-	HL2-BK	HL2-WH	HL2-GN	Hooded Lampholder	25
QR100-GY	QR100-BR	QR100-BK	QR100-WH	-	Commercial Die-Cast Metal Quartz Halogen Lamp Holder 120V Input, 100 Watt T4 Bi-Pin included	25

Appendix 4.13D

Lighting Fixture Cutsheet

L1

Evolve® EALS Series

LED Outdoor Area Light

CUSTOMER NAME _____

Project Name _____

Date _____ Type _____

Catalog Number _____

The EALS Area Light luminaire offers a wide range of optical patterns, color temperatures, lumen packages and mounting configurations to optimize area light applications, as well as provide versatility in lighting design within the same form-factor. They are ideal for commercial property site-lighting applications such as retail and commercial exteriors.

CONSTRUCTION

Housing:	Aluminum die cast enclosure. Integral heat sink for maximum heat transfer
Lens:	Impact resistant tempered glass
Paint:	Corrosion resistant polyester powder paint, minimum 2.0 mil thickness Standard = Black, Dark Bronze Gray, White (RAL & custom colors available) Optional = Coastal Finish
Weight:	27 lbs

OPTICAL SYSTEM

Lumens: **Photometry:**	7,000 - 30,300 Type II, III, IV & V
Efficacy: **CCT:**	126 - 160 LPW 3000K, 4000K, 5000K
CRI:	≥70
Upward Light Output Ration (ULOR):	0 Horizontal Orientation

ELECTRICAL

Input Voltage:	120-277V, 277-480V & 347-480V
Input Frequency:	50/60 Hz
Power Factor (PH):	> 90% at rated watts
Total Harmonic Distortion (THD):	< 20% at rated watts

SURGE PROTECTION

TYPICAL (120 STRIKES)		
6kV/3kA*	10kV/5kA*	20kV/10kA*

*Per ANSI C136.2-2015

LUMEN MAINTENANCE

Projected Lxx per IES TM-21-11 at 25°C

Optics	LXX(10K) @ Hours		
	25,000 HR	50,000 HR	60,000 HR
C2, C3, C4, C5, D2, D3, D4, D5	L96	L92	L91
F5, H2, H3, H4, H5	L95	L93	L92
F2, F3, F4, J3, J3, J4, J5	L95	L93	L92
K2, K3, K4, K5	L95	L93	L92

Note: Projected Lxx based on LM80 (= 10,000 hour testing). Accepted Industry tolerances apply to initial luminous flux and lumen maintenance measurements

LUMINAIRE AMBIENT TEMPERATURE FACTOR

Ambient Temp (°C)	Initial Flux Factor	Ambient Temp (°C)	Initial Flux Factor
10	1.02	30	0.99
20	1.01	40	0.98
25	1.00		

RATINGS

Operating Temperature:	-40° C to 40° C
Vibration:	3G per ANSI C136.31-2010
LM-79:	Testing in accordance with IESNA Standards

CONTROLS

Dimming:	Standard - 0-10V Optional - DALI (Option U)
Sensors:	Photo Electric Sensors (PE) available LightGrid and Daintree Compatible

WARRANTY

☐ 5 Year (Standard) ☐ 10 Year (Optional)

GE current
a Daintree company

IP65 IK08

Evolve® EALS Series

LED Outdoor Area Light

Catalog Logic and Photometric Plots

CUSTOMER NAME

Project Name _____

Date _____ Type _____

Catalog Number _____

Ordering Information

EALS	03	0	H4	AF	7	50	N	A	D1	BLCK	H
_ _ _ _	_ _	_	_ _	_ _	_	_ _	_	_	_ _	_ _ _ _	_ _ _

PRODUCT ID	GENERATION	VOLTAGE	OPTICAL CODE	DISTRIBUTION	CRI	CCT	DIMMING[2]	CONTROLS	MOUNTING ARM	COLOR	OPTIONS
E= EVOLVE	03	0[1]=120-277	Cx =7500	SM = Symmetric Medium	7 = 70 (min)	30[11] = 3000K	N[13] = Dimming thru PE receptacle	1 = None	C1[4] = Integral Slipfitter: Standard	BLCK = Black	F= Fusing
AL= Area Light		H[1] = 347-480V	Dx = 10000	SW = Symmetric Wide		40 = 4000K	D[13] = External Dimming 18/2 3 ft Cable	A = ANSI C136.41 7-Pin Receptacle (No Control)	D1[5] = Universal Mounting Arm: Fitted for round or square pole mounting	DKBZ = Dark Bronze	H[8] = Motion Sensor (Sensor Switch)
S = Standard		E[1,9] = 277-480	Fx = 15000	SH = Symmetric High Angle		50 = 5000K	X[14] = Non dimming, no external dimming leads	D = ANSI C136.417-Pin Receptacle with Shorting Cap	K1[4,6] = Knuckle Slipfitter: For 1.9 in. - 2.3 in OD Tenon	GRAY = Gray	H1 = LightGrid w/ WattStopper
			Hx = 20000	AF = Asymmetric Forward				E[3] = ANSI C136.41 7-pin with Non-Dimming PE Control	S1[4,6] = Knuckle Slipfitter: For 2.3 in. - 3.0 in OD Tenon	WHTE = White	H2[8] = Daintree enabled motion sensor
		1 = 120	Jx = 25000	AH = Asymmetric High Angle					V1[4,6] = Knuckle Wall Mount		H4 = Motion Sensor (WattStopper)
		2 = 208	Kx = 30000	AW = Asymmetric Wide							J = cUL/Canada
		3 = 240		AN = Asymmetric Narrow/Auto							L = Tool-Less Entry
		4 =277									R = Enhanced Surge Protection (10kV/5kA)
		D = 347									S1[12] = Rotated Left
		5 = 480									S2[12] = Rotated Right
											T = Extreme Surge Protection (20kV/10kA)
											U [7,8] = DALI Programmable
											V = 3 Position Terminal Block
											Y[10] = Coastal Finish
											XXX = Special Options

[1] Not Available with Fusing, Must Choose a Discrete Voltage with "F" Option Code
[2] Note Standard Dimming is 0-10V
[3] PE Control only available for 120-277V, 347V or 480V Discrete Voltage.
[4] Supplied with 3ft leads
[5] Supplied with 16/3 ft Cable
[6] Restricted Aiming Angle of 0-45°
[7] Compatible with LightGrid Wireless Control Nodes, Not Compatible with Motion Sensor Control
[8] Not available in 347V, 480V or 347-480V
[9] Only available with H, J & K optics
[10] Recommended for installations within 750 feet from coast. Lead time varies, check with factory.
[11] Select 3000K CCT for IDA approved fixtures.
[12] For aimed left of right light distribution orientation, as assembled in manufacturing. Not applicable for Symmetric Distributions
[13] Can only be ordered with controls A, D, and E
[14] Required for Cx optical codes only, not available for other optic codes

For additional information on EALS files, please click one of the following links:

Non-Shielded Shielded

GE current
a Daintree company

Evolve® EALS Series

LED Area Light

Spec Tables

CUSTOMER NAME

Project Name _____

Date _____ Type _____

Catalog Number _____

TYPE	OPTIC CODE	DISTRIBUTION	TYPICAL INITIAL LUMENS		TYPICAL SYSTEM WATTAGE	BUG RATINGS		IES FILE NUMBER		
			3000K	4000K & 5000K	120-277 & 347-480V	3000K B-U-G	4000 & 5000K B-U-G	3000K	4000K	5000K
TYPE V	C5	Symmetric Medium (SM)	7300	7500	46	B3-U0-G1	B3-U0-G1	EALS03_C5SM730_.IES	EALS03_C5SM740_.IES	EALS03_C5SM750_.IES
	D5	Symmetric Medium (SM)	9800	10000	64	B3-U0-G1	B3-U0-G1	EALS03_D5SM730_.IES	EALS03_D5SM740_.IES	EALS03_D5SM750_.IES
	F5	Symmetric Medium (SM)	14700	15000	101	B4-U0-G2	B4-U0-G2	EALS03_F5SM730_.IES	EALS03_F5SM740_.IES	EALS03_F5SM750_.IES
	H5	Symmetric Medium (SM)	19600	20000	140	B4-U0-G2	B4-U0-G2	EALS03_H5SM730_.IES	EALS03_H5SM740_.IES	EALS03_H5SM750_.IES
	J5	Symmetric Medium (SM)	24500	25000	186	B4-U0-G2	B4-U0-G2	EALS03_J5SM730_.IES	EALS03_J5SM740_.IES	EALS03_J5SM750_.IES
	K5	Symmetric Medium (SM)	29400	30000	239	B5-U0-G3	B5-U0-G3	EALS03_K5SM730_.IES	EALS03_K5SM740_.IES	EALS03_K5SM750_.IES
	C5	Symmetric Wide (SW)	7300	7500	46	B2-U0-G1	B2-U0-G1	EALS03_C5SW730_.IES	EALS03_C5SW740_.IES	EALS03_C5SW750_.IES
	D5	Symmetric Wide (SW)	9800	10100	64	B3-U0-G1	B3-U0-G1	EALS03_D5SW730_.IES	EALS03_D5SW740_.IES	EALS03_D5SW750_.IES
	F5	Symmetric Wide (SW)	14700	15100	101	B3-U0-G2	B3-U0-G2	EALS03_F5SW730_.IES	EALS03_F5SW740_.IES	EALS03_F5SW750_.IES
	H5	Symmetric Wide (SW)	19700	20200	140	B4-U0-G2	B4-U0-G2	EALS03_H5SW730_.IES	EALS03_H5SW740_.IES	EALS03_H5SW750_.IES
	J5	Symmetric Wide (SW)	24600	25200	186	B4-U0-G2	B4-U0-G2	EALS03_J5SW730_.IES	EALS03_J5SW740_.IES	EALS03_J5SW750_.IES
	K5	Symmetric Wide (SW)	29600	30300	239	B5-U0-G2	B5-U0-G2	EALS03_K5SW730_.IES	EALS03_K5SW740_.IES	EALS03_K5SW750_.IES
	C5	Symmetric High Angle (SH)	7000	7200	46	B3-U0-G1	B3-U0-G1	EALS03_C5SH730_.IES	EALS03_C5SH740_.IES	EALS03_C5SH750_.IES
	D5	Symmetric High Angle (SH)	9400	9600	64	B3-U0-G2	B3-U0-G2	EALS03_D5SH730_.IES	EALS03_D5SH740_.IES	EALS03_D5SH750_.IES
	F5	Symmetric High Angle (SH)	14200	14500	101	B4-U0-G2	B4-U0-G2	EALS03_F5SH730_.IES	EALS03_F5SH740_.IES	EALS03_F5SH750_.IES
	H5	Symmetric High Angle (SH)	18900	19300	140	B4-U0-G2	B4-U0-G2	EALS03_F5SH730_.IES	EALS03_F5SH740_.IES	EALS03_F5SH750_.IES
	J5	Symmetric High Angle (SH)	23600	24100	186	B5-U0-G3	B5-U0-G3	EALS03_J5SH730_.IES	EALS03_J5SH740_.IES	EALS03_J5SH750_.IES
	K5	Symmetric High Angle (SH)	28400	29000	239	B5-U0-G3	B5-U0-G3	EALS03_K5SH730_.IES	EALS03_K5SH740_.IES	EALS03_K5SH750_.IES
TYPE IV	C4	Asymmetric Forward (AF)	7300	7500	50	B1-U0-G2	B1-U0-G2	EALS03_C4AF730_.IES	EALS03_C4AF740_.IES	EALS03_C4AF750_.IES
	D4	Asymmetric Forward (AF)	9800	10000	70	B2-U0-G2	B2-U0-G2	EALS03_D4AF730_.IES	EALS03_D4AF740_.IES	EALS03_D4AF750_.IES
	F4	Asymmetric Forward (AF)	14700	15000	116	B2-U0-G2	B2-U0-G2	EALS03_F4AF730_.IES	EALS03_F4AF740_.IES	EALS03_F4AF750_.IES
	H4	Asymmetric Forward (AF)	19600	20000	140	B3-U0-G3	B3-U0-G3	EALS03_H4AF730_.IES	EALS03_H4AF740_.IES	EALS03_H4AF750_.IES
	J4	Asymmetric Forward (AF)	24500	25000	186	B3-U0-G3	B3-U0-G3	EALS03_J4AF730_.IES	EALS03_J4AF740_.IES	EALS03_J4AF750_.IES
	K4	Asymmetric Forward (AF)	29400	30000	239	B3-U0-G4	B3-U0-G4	EALS03_K4AF730_.IES	EALS03_K4AF740_.IES	EALS03_K4AF750_.IES
	C4	Asymmetric High Angle (AH)	7000	7200	50	B2-U0-G2	B2-U0-G2	EALS03_C4AH730_.IES	EALS03_C4AH740_.IES	EALS03_C4AH750_.IES
	D4	Asymmetric High Angle (AH)	9400	9600	70	B2-U0-G2	B2-U0-G2	EALS03_D4AH730_.IES	EALS03_D4AH740_.IES	EALS03_D4AH750_.IES
	F4	Asymmetric High Angle (AH)	14200	14500	116	B3-U0-G3	B3-U0-G3	EALS03_F4AH730_.IES	EALS03_F4AH740_.IES	EALS03_F4AH750_.IES
	H4	Asymmetric High Angle (AH)	18900	19300	140	B3-U0-G3	B3-U0-G4	EALS03_H4AH730_.IES	EALS03_H4AH740_.IES	EALS03_H4AH750_.IES
	J4	Asymmetric High Angle (AH)	23600	24100	186	B3-U0-G4	B3-U0-G4	EALS03_J4AH730_.IES	EALS03_J4AH740_.IES	EALS03_J4AH750_.IES
	K4	Asymmetric High Angle (AH)	28400	29000	239	B3-U0-G4	B3-U0-G4	EALS03_K4AH730_.IES	EALS03_K4AH740_.IES	EALS03_K4AH750_.IES
TYPE III	C3	Asymmetric Wide (AW)	7300	7500	50	B2-U0-G1	B2-U0-G1	EALS03_C3AW730_.IES	EALS03_C3AW740_.IES	EALS03_C3AW750_.IES
	D3	Asymmetric Wide (AW)	8900	10100	70	B2-U0-G2	B2-U0-G2	EALS03_D3AW730_.IES	EALS03_D3AW740_.IES	EALS03_D3AW750_.IES
	F3	Asymmetric Wide (AW)	14700	15100	116	B2-U0-G2	B2-U0-G2	EALS03_F3AW730_.IES	EALS03_F3AW740_.IES	EALS03_F3AW750_.IES
	H3	Asymmetric Wide (AW)	19800	20200	140	B3-U0-G2	B3-U0-G3	EALS03_H3AW730_.IES	EALS03_H3AW740_.IES	EALS03_H3AW750_.IES
	J3	Asymmetric Wide (AW)	24600	25200	186	B3-U0-G3	B3-U0-G3	EALS03_J3AW730_.IES	EALS03_J3AW740_.IES	EALS03_J3AW750_.IES
	K3	Asymmetric Wide (AW)	29600	30300	239	B3-U0-G3	B3-U0-G3	EALS03_K3AW730_.IES	EALS03_K3AW740_.IES	EALS03_K3AW750_.IES
TYPEII	C2	Asymmetric Narrow/Auto (AN)	7300	7500	50	B3-U0-G2	B2-U0-G2	EALS03_C2AN730_.IES	EALS03_C2AN740_.IES	EALS03_C2AN750_.IES
	D2	Asymmetric Narrow/Auto (AN)	9800	10100	70	B2-U0-G2	B2-U0-G2	EALS03_D2AN730_.IES	EALS03_D2AN740_.IES	EALS03_D2AN750_.IES
	F2	Asymmetric Narrow/Auto (AN)	14700	15100	116	B2-U0-G2	B3-U0-G3	EALS03_F2AN730_.IES	EALS03_F2AN740_.IES	EALS03_F2AN750_.IES
	H2	Asymmetric Narrow/Auto (AN)	19700	20200	140	B3-U0-G3	B3-U0-G3	EALS03_H2AN730_.IES	EALS03_H2AN740_.IES	EALS03_H2AN750_.IES
	J2	Asymmetric Narrow/Auto (AN)	24600	25200	186	B3-U0-G3	B3-U0-G3	EALS03_J2AN730_.IES	EALS03_J2AN740_.IES	EALS03_J2AN750_.IES
	K2	Asymmetric Narrow/Auto (AN)	29600	30300	239	B3-U0-G3	B3-U0-G3	EALS03_K2AN730_.IES	EALS03_K2AN740_.IES	EALS03_K2AN750_.IES

Evolve® EALS Series

LED Outdoor Area Light

Photometric Plots

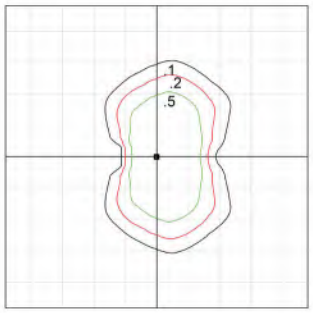
CUSTOMER NAME

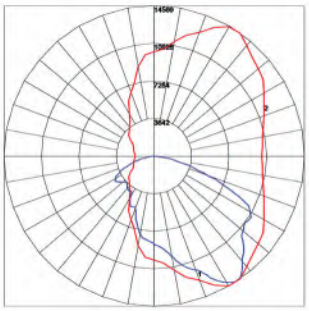
Project Name _____

Date _____ Type _____

Catalog Number _____

EALS03
ASYMMETRIC NARROW
(K2AN750)
30300 Lumens
5000k
EALS03_K2AN750_____.IES

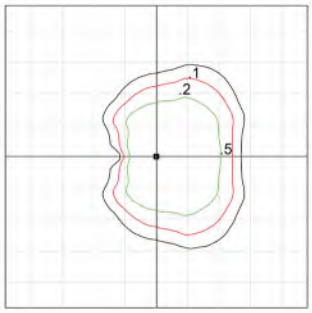


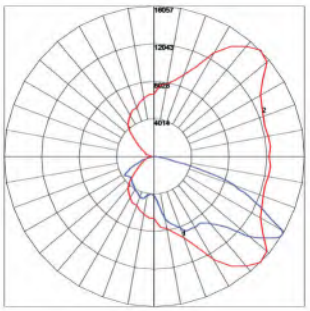


Grid Distance in Units of Mounting Height at 40' Initial Footcandle Values at Grade

——: Vertical plane through horizontal angle of maximum candlepower at 55°
——: Vertical plane through horizontal angle 34°

EALS03
ASYMMETRIC WIDE
(K3AW750)
30300 Lumens
5000k
EALS03_K3AW750_____.IES

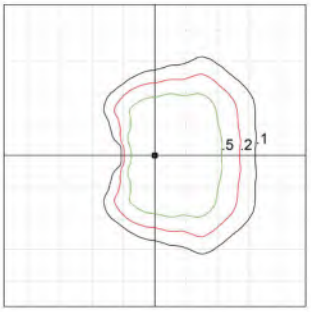


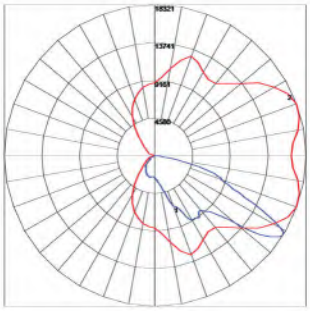


Grid Distance in Units of Mounting Height at 40' Initial Footcandle Values at Grade

——: Vertical plane through horizontal angle of maximum candlepower at 45°
——: Vertical plane through horizontal angle 58°

EALS03
ASYMMETRIC FORWARD
(K4AF750)
30000 Lumens
5000k
EALS03_K4AF750_____.IES

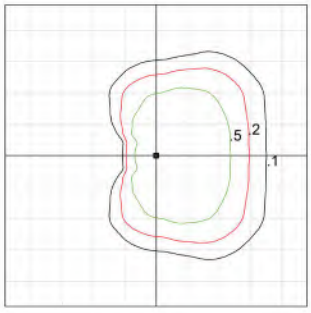


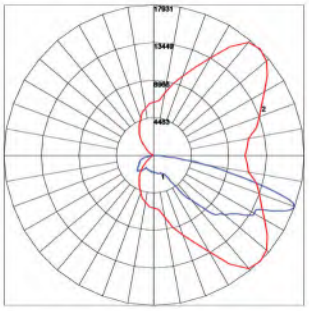


Grid Distance in Units of Mounting Height at 40' Initial Footcandle Values at Grade

——: Vertical plane through horizontal angle of maximum candlepower at 20°
——: Vertical plane through horizontal angle 58°

EALS03
ASYMMETRIC HIGH ANGLE
(K4AH750)
29000 Lumens
5000k
EALS03_K4AH750_____.IES





Grid Distance in Units of Mounting Height at 40' Initial Footcandle Values at Grade

——: Vertical plane through horizontal angle of maximum candlepower at 45°
——: Vertical plane through horizontal angle 70°

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Evolve® EALS Series

LED Outdoor Area Light

CUSTOMER NAME

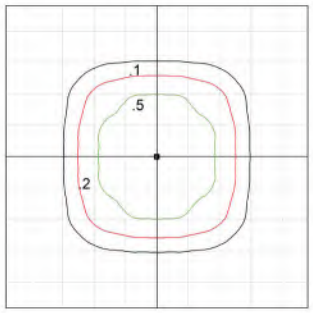
Project Name

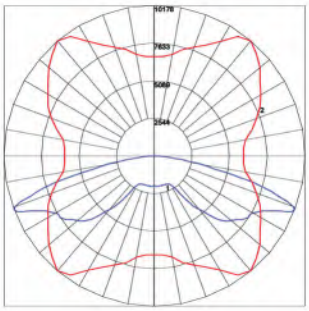
Date Type

Catalog Number

Photometric Plots

EALS03
SYMMETRIC HIGH ANGLE
(K5SH750)
29000 Lumens
5000k
EALS03_K5SH750_____.IES

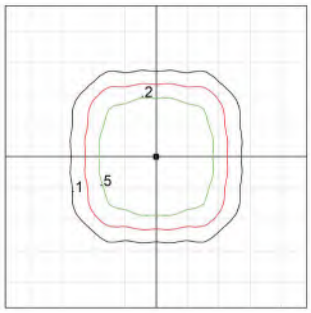


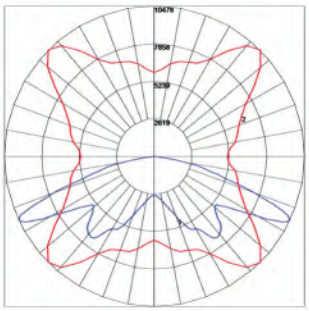


Grid Distance in Units of Mounting Height at 40' Initial Footcandle Values at Grade

——: Vertical plane through horizontal angle of maximum candlepower at 50°
——: Vertical plane through horizontal angle 69°

EALS03
SYMMETRIC MEDIUM
(K5SM750)
30000 Lumens
5000k
EALS03_K5SM750_____.IES

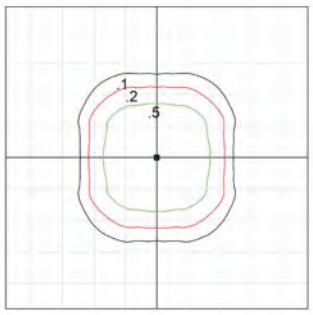


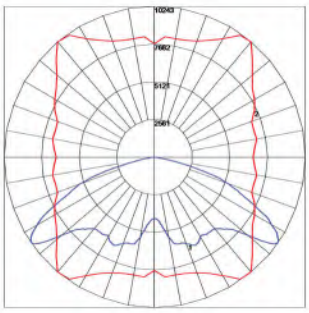


Grid Distance in Units of Mounting Height at 40' Initial Footcandle Values at Grade

——: Vertical plane through horizontal angle of maximum candlepower at 45°
——: Vertical plane through horizontal angle 65°

EALS03
SYMMETRIC WIDE
(K5SW750)
30300 Lumens
5000k
EALS03_K5SW750_____.IES





Grid Distance in Units of Mounting Height at 40' Initial Footcandle Values at Grade

——: Vertical plane through horizontal angle of maximum candlepower at 50°
——: Vertical plane through horizontal angle 55°

Evolve® EALS Series

LED Outdoor Area Light

CUSTOMER NAME

Project Name

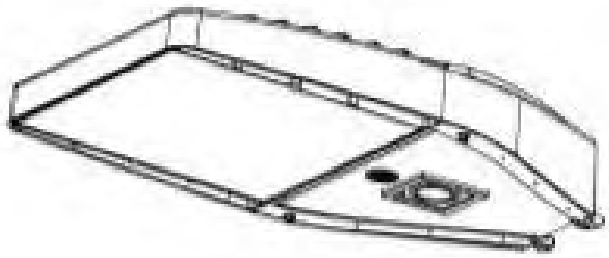
Date Type

Catalog Number

Motion Sensing

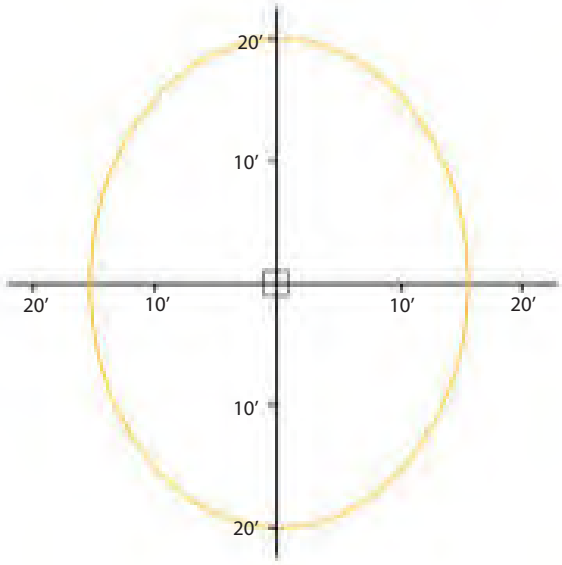
H-MOTION SENSING OPTION

• Recommended Mounting Height: 15-30′ (4.6-9.1m)
• For mounting heights exceeding 30 ft., pole mounted sensors are recommended
• Coverage Radius: 15-20′ (4.6-6.1 m).
• Provides 270 degree of coverage (approx 90 is blocked by the pole)
• Default Settings:
– Output: Occupied - 100%/Unoccupied - 50%
– Integral PE Sensor.
– 5 minute post-occupancy time delay, 5 minute dimming ramp-down.
• Fixture power increase of 1W expected with sensor use.



H1/4 - MOTION SENSING OPTION (WATTSTOPPER)

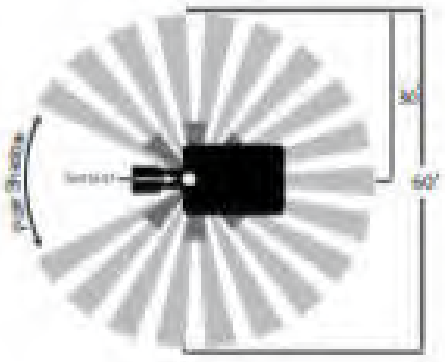
• Recommended Mounting Height: 15-30′ (4.6-9.1m)
• For mounting heights exceeding 30 ft., pole mounted sensors are recommended
• Coverage Radius: 15-20′ (4.6-6.1 m).
• Provides 270 degree of coverage (approx 90 is blocked by the pole)
• Default Settings:
– Output: Occupied - 100%/Unoccupied - 50%
– PE Sensor: Enabled
– Ramp/Fade: 5 Minutes/5 Minutes
• Adds < 1W to fixture power rating
• Field programmable using FSIR-100 hand held programmer



Sensing Pattern Area Fixture
Up to 30 ft. Mounting Height

H2 - MOTION SENSING OPTION (DAINTREE)

• Recommended Mounting Height: 15-30′ (4.6-9.1m)
• For mounting heights exceeding 30 ft., pole mounted sensors are recommended
• Provides a coverage area radius for walking motion of 15-20 ft. (4.57-6.10m)
• Provides 270 degree of coverage (approx 90 is blocked by the pole)
• Default Settings:
– Output: Occupied - 100%/Unoccupied - 50%
– PE Sensor: None
– Ramp/Fade: 5 Minutes/5 Minutes
• Adds < 1W to fixture power rating
• Requires Daintree Enterprise and wide area control (WAC)



Evolve® EALS Series

LED Outdoor Area Light

CUSTOMER NAME

Project Name

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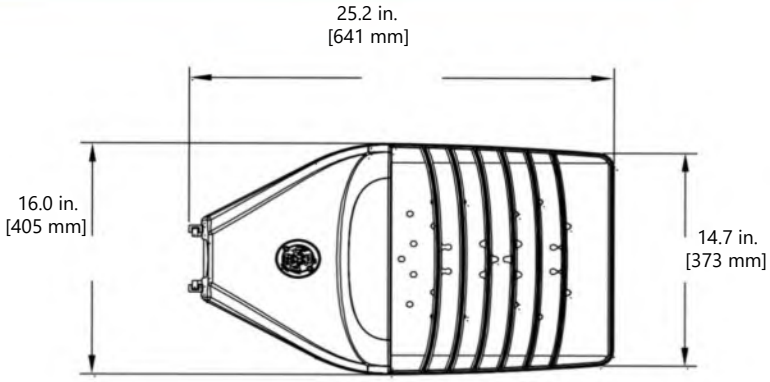
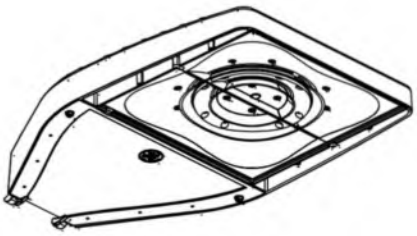
Catalog Number

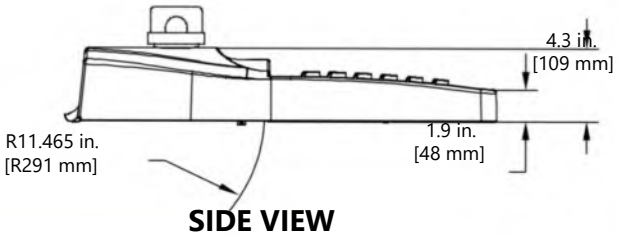
Mounting & Accessories

INTEGRAL SLIPFITTER: C1



TOP VIEW

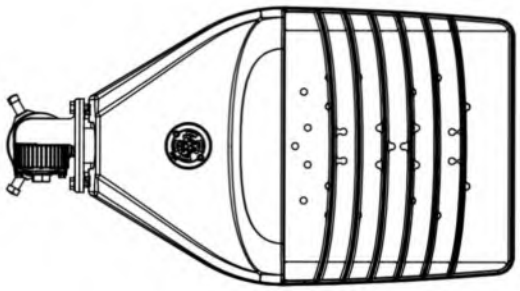




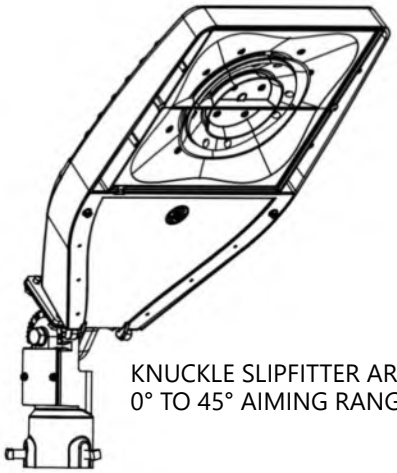
SIDE VIEW

FRONT VIEW

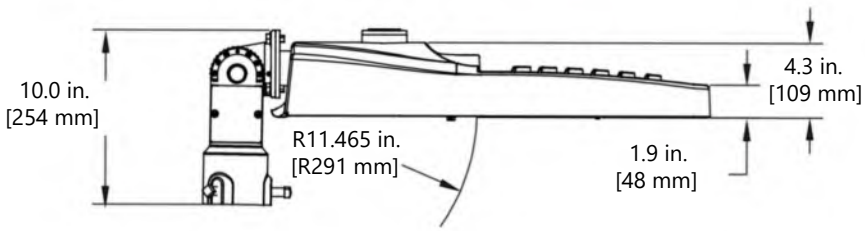
KNUCKLE SLIPFITTER: S1

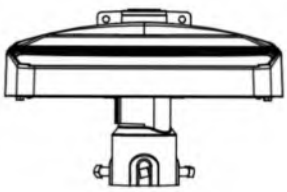


TOP VIEW



KNUCKLE SLIPFITTER ARM MOUNT
0° TO 45° AIMING RANGE





Evolve® EALS Series

LED Outdoor Area Light

CUSTOMER NAME

Project Name

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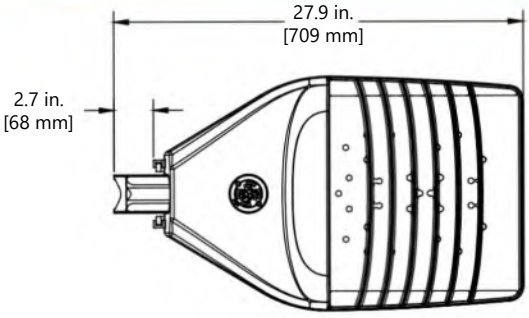
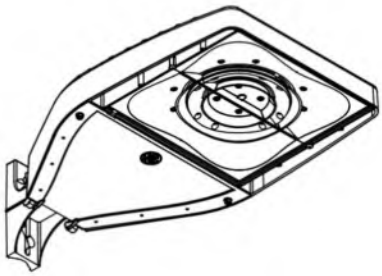
Catalog Number

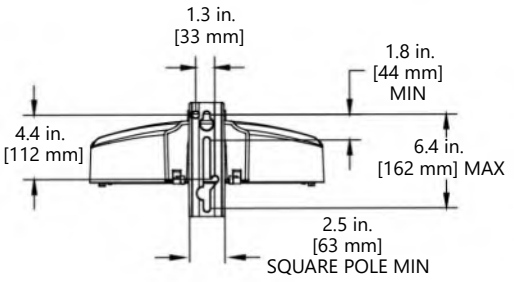
Mounting & Accessories

UNIVERSAL ARM MOUNT: D1

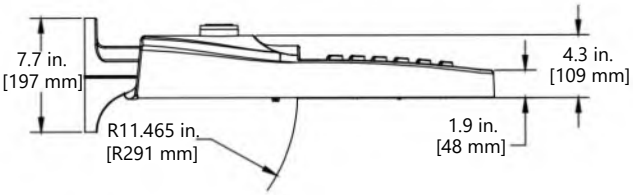


TOP VIEW

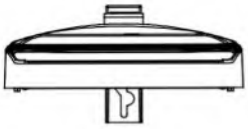




BACK VIEW

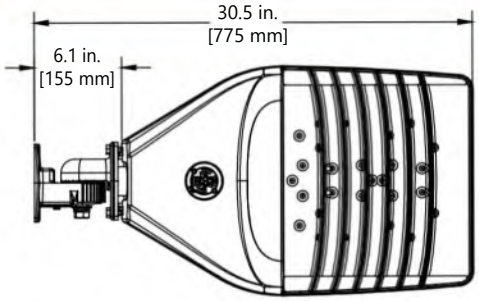


SIDE VIEW

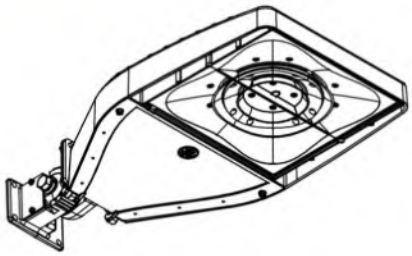


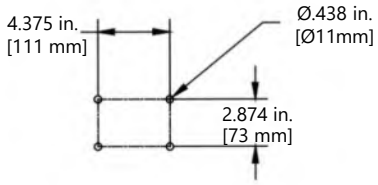
FRONT VIEW

KNUCKLE WALL MOUNT: V1



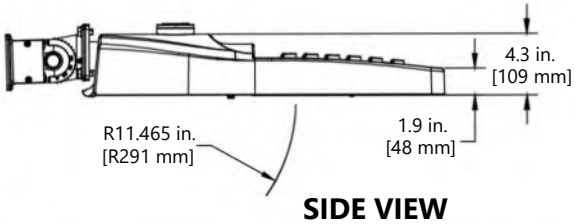
TOP VIEW





Wall Mount Hole Pattern

BACK VIEW



SIDE VIEW

FRONT VIEW

DATA

- Approximate Net Weight: 26-28 lbs (11.79 kgs-12.97 kgs)
- Effective Projected Area (EPA):
  – Knuckle Slipfitter S1, 45° aim, EPA = 2.45
  – Knuckle w/Slipfitter S1, downward aim, EPA = 0.73
  – Universal Arm Mount D1, EPA = 0.54
  - Knuckle Wall Mount V1, 45° aim, EPA = 0.77 sq ft min and 1.43 sq ft max
  – Integral Slipfitter C1, EPA = 0.63

Evolve® EALS Series
LED Outdoor Area Light

Mounting & Accessories

CUSTOMER NAME

Project Name _____

Date _____ Type _____

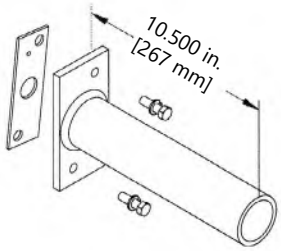
Catalog Number _____

MOUNTING ARMS FOR SLIPFITTER

Order separately with Mounting Option C1 (Slipfitter)

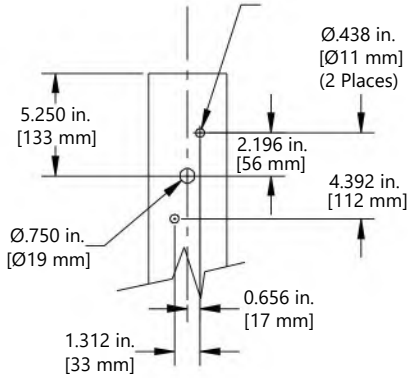
SQUARE POLE MOUNTING ARM

3.5 TO 4.5-inch (89 to 114mm) SQUARE
(WILL ALLOW 4 FIXTURES PER POLE @ 90 DEGREES.)



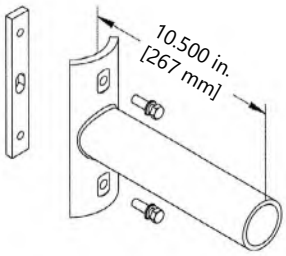
ORDER SEPARATELY FROM FIXTURE AS CATALOG NUMBER
SPA-EAMT10BLCK "Black"
SPA-EAMT10DKBZ "Dark Bronze"

SQUARE POLE MOUNTING DRILLING TEMPLATE



ROUND POLE MOUNTING ARM DRILLING TEMPLATE

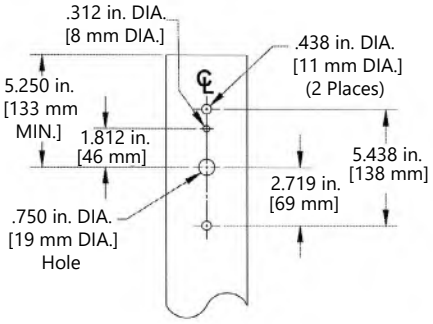
3.5 TO 4.5-inch (89 to 114mm) OD
(WILL ALLOW 4 FIXTURES PER POLE @ 90 DEGREES.)



ORDER SEPARATELY FROM FIXTURE AS CATALOG NUMBER
RPA-EAMT10BLCK "Black"
RPA-EAMT10DKBZ "Dark Bronze"

ROUND POLE MOUNTING DRILLING TEMPLATE

3.5 TO 4.5-inch (89 to 114mm) OD
round pole mounting arm



Wall Mounting Bracket Adapter Plate

ORDER SEPARATELY FROM FIXTURE AS CATALOG NUMBER
WMB-EAMT06
*NOTE: For Wall Mounting, order luminaire with mounting arm: C1 = Slipfitter 2" Pipe (2.378 in. OD) supplied with leads.

Other mounting patterns are available for retrofit installations.
Contact manufacturing for other available mounting patterns.

SAP NUMBER	PART NUMBER	DESCRIPTION	SAP NUMBER	PART NUMBER	DESCRIPTION
93123552	WANSI - 277	ANSI 136.41 Dimming PE Daintree Enable, 105-305V	28299	PECOTL	Standard 120-277V
93123553	WANSI - 480	ANSI 136.41 Dimming PE Daintree Enable, 312-530V	28294	PEC5TL	Standard 480V
93029237	PED-MV-LED-7	ANSI C136.41 Dimming PE, 120-277V	80436	PECDTL	Standard 347V
93029238	PED-347-LED-7	ANSI C136.41 Dimming PE, 347V	93147530	PECHTL	Long Life Standard PE, 347-480V
93029239	PED-480-LED-7	ANSI C136.41 Dimming PE, 480V	73251	SCCL-PECTL	Shorting Cap

PE Accessories (to be ordered separately)

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