

FINAL

Night Lighting Management Plan

Valley South Subtransmission Project

Prepared for

Southern California Edison

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Mitigation Measures Covered:

MM AES-5: Minimize Night Lighting at Construction Sites and Project Facilities

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List of Acronyms

CEQA	California Environmental Quality Act
CPUC	California Public Utilities Commission
FEIR	Final Environmental Impact Report
kV	Kilovolt
LED	Light-Emitting Diode
LPS	Low-Pressure Sodium
MM	Mitigation Measure
MMP	Mitigation Monitoring Plan
MPR	Minor Project Refinement
PTC	Permit to Construct
SCE	Southern California Edison
TSP	Tubular Steel Pole
VSSP	Valley South Subtransmission Project

SECTION 1 INTRODUCTION

This Night Lighting Management Plan (Plan) for Southern California Edison's (SCE) Valley South Subtransmission Project (VSSP or Project) identifies compliance activities that will support Mitigation Measure (MM) AES-5 from Appendix 6, the Mitigation Monitoring Plan (MMP) of the Project's Final Environmental Impact Report (FEIR). This Plan is written in compliance with the guidance provided by the California Public Utilities Commission (CPUC) Permit to Construct (PTC), and in compliance with the impacts analyzed in the FEIR.

This Plan has been developed to facilitate compliance with the measures listed in Table 6.1 of the MMP; and when implemented, will reduce potential impacts that sensitive receptors experience from night lighting throughout the entirety of the Project area.

1.1 Project Overview

Wilson Utility Construction Company (Wilson) has been contracted by SCE to perform the engineering, environmental compliance, property acquisition, material procurement, and construction of the Valley South Subtransmission Project. The Project includes construction of a new 115-kilovolt (kV) subtransmission line approximately 15.4 miles in length from Valley Substation in the City of Menifee to just west of Triton Substation in the City of Temecula.

Segment 1 consists of the construction of approximately 12 miles of new 115kV subtransmission line from Valley Substation, including the associated wood and steel poles and relocation of distribution and telecommunication facilities along the corridor to a tubular steel pole (TSP) at the intersection of Leon and Benton Road. Additionally, Segment 1 includes two sections of 115kV underground trenching and conduit installation within Riverside County. Segment 2 consists of the replacement of 3.4 miles of existing 115kV subtransmission line conductor from the intersection of Leon and Benton road to the existing terminal TSP on the south side of Nicolas Road near Triton Substation.

VSSP work activities performed by SCE or others includes equipping an existing 115kV line position and providing protection equipment as required at Valley Substation; installation of telecommunications equipment at Triton and Valley substations to connect the Project to SCE's existing telecommunication system; and, the installation of the 115kV underground cable and connections.

1.2 Lead Agencies

Lead agencies have discretionary approval over VSSP and are responsible for reviewing aspects of the measures documented in this Plan.

- The CPUC is the state lead agency responsible for compliance with the California Environmental Quality Act (CEQA).

1.3 Mitigation Measures

This Plan addresses MM AES-5 from the FEIR that states:

Minimize Night Lighting at Construction Sites and Project Facilities. SCE shall avoid night lighting where possible and minimize its use under all circumstances. To ensure this, SCE shall prepare a Night Lighting Management Plan for both construction and O&M. The Plan shall specify the following:

- *Use of portable truck-mounted lighting.*

Introduction

- *Emphasis on use of low-pressure sodium (LPS) or amber light-emitting diode (LED) lighting.*
- *White lighting (metal halide) would: a) only be used when necessitated by specific work tasks; b) would not be used for dusk-to-dawn lighting; and c) would be less than 3,500 Kelvin color temperature.*
- *All lamp locations, orientations, and intensities including security, roadway and task lighting.*
- *Each light fixture and each light shield.*
- *Total estimated outdoor lighting footprint expressed as lumens or lumens per acre.*
- *Detailed list of anticipated circumstances and activities that would require night lighting including the expected frequency of the activity, the duration of the activity, and the expected amount of lighting that would be necessary for that activity.*
- *Light fixtures that could be visible from beyond Project facility boundaries shall have cutoff angles sufficient to prevent lamps and reflectors from being visible beyond the Project facility boundary, including security lighting.*
- *Motion sensors and other controls to be used, especially for security lighting such that lights operate only when the area is occupied.*
- *Surface treatment specification that will be employed to minimize glare and sky glow.*

The Night Lighting Management Plan shall also consider the following factors:

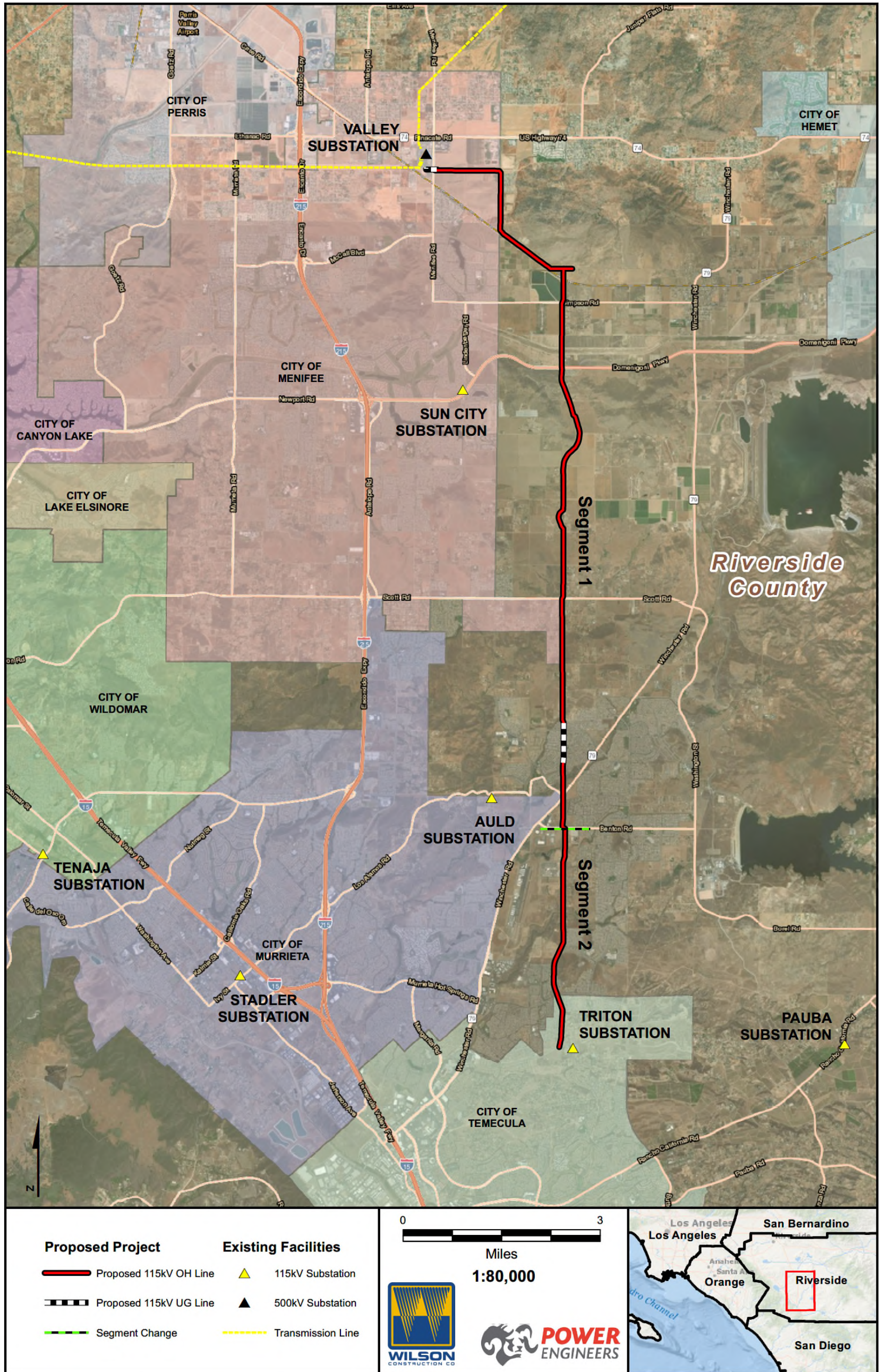
- *All temporary construction lighting and permanent exterior lighting shall include: (a) lamps and reflectors that are not visible from beyond the construction site or facility including any off-site security buffer areas; (b) lighting that shall not cause excessive reflected glare; (c) direct lighting that shall not illuminate the nighttime sky, except for required Federal Aviation Administration aircraft safety lighting (which, if required, shall be an on-demand, audio-visual warning system that is triggered by radar technology); (d) minimization of illumination of the Project and its immediate vicinity; (e) avoidance of sky glow caused by Project lighting will be avoided; and (f) compliance with local policies and ordinances to be outlined in the Night Lighting Management Plan. All permanent light sources shall be below 3,500 Kelvin color temperature (warm white) and shall be full cutoff fixtures.*
- *Always-on security lighting is to be limited to one low-wattage, fully shielded, full cutoff light fixture at the main entrance to facilities. All other security lighting is to be motion activated only through the use of passive infrared sensors and controlled as specific zones such that only targeted areas are illuminated. No other lighting is to be utilized on a nightly basis when a facility is not occupied.*
- *Lighted nighttime maintenance is to be minimized or avoided as a routine practice and should occur only during emergencies.*

The draft Night Lighting Management Plan shall be submitted to the CPUC at least 60 days prior to the start of construction. Following the CPUC's review of the draft plan, and at least 15 days prior to the start of construction, SCE shall submit to the CPUC for review and approval, a final Night Lighting Management Plan. Construction activities shall not start until CPUC's approvals of the plan have been received.

1.4 Applicable Project Areas

This Plan addresses construction lighting where night work would occur and where night security may be required on the Project. Additionally, night lighting may be required at material and crew yards. This plan is applicable to all segments of the Project. Refer to Figure 1 on the following page.

Figure 1 Project Overview Map



1.5 Timing

The requirements of MM AES-5 are applicable during the preconstruction, construction and post-construction and restoration phases of the Project as well as for operations and maintenance (O&M). Any night work for O&M would only occur during emergency situations.

SECTION 2 METHODS

This section includes a detailed description of the actions required to implement the applicable MM for Project work covered by this Plan. The Project may include construction lighting for nighttime activities conducted at construction work sites, staging areas, substations, and yards.

Nighttime construction is limited by applicable local jurisdiction (county, city) noise rules, standards, and ordinance noise prohibitions. It is expected that most construction activities will be performed during daylight hours without the need for any lighting. Occasionally, construction activities may be constrained by outage periods, permitting requirements, and/or schedule that would create a need to work during nighttime hours to complete a task.

Construction activities associated with yards are generally related to the delivery and loading and unloading of materials and equipment. When feasible, these activities will occur during daylight hours without the need for lighting.

2.1 Night Lighting Requirements

As needed, construction night work and security lighting will be performed in accordance with the following guidelines:

- Light bulbs and reflectors will not be visible from public viewing areas.
- Lights will not cause reflected glare.
- Permanent, unshielded uplighting will be prohibited.
- Illumination of the Project facilities, vicinity, and nighttime sky will be minimized.
- Exterior light fixtures will be hooded, with lights directed downward or toward the area to be illuminated so that backscatter to the nighttime sky is minimized.
- Luminescence or light sources will be shielded to prevent light trespass outside of the Project boundary.
- Lighting will be the minimum necessary brightness consistent with worker safety.
- Any required tower aircraft safety lighting will comply with applicable Federal Aviation Administration standards and regulations. At this time none is anticipated for the Project.

Where night work is allowed on the Project, portable lights with reflector housings that can be directionally shielded will be used for illumination. Low-mast lighting systems will be used as much as possible. The reflectors will be directed downward and toward the specific work area as appropriate to minimize stray light spillover. To accommodate specific short-term tasks, portable lighting that provides higher light levels as well as lights that need to be aimed above the horizontal may be used for short periods.

Lights will be adjusted to illuminate only the areas necessary for night work tasks in specific work locations. Specific locations of night work are currently unknown. The necessity for night work will be determined once construction has begun and will occur only if night work is required to meet schedule and/or to avoid permitting constraints in permitted areas. If night work is deemed necessary, this Plan will be updated with a site-specific lighting plan, as necessary.

For each work area where activities are occurring at night, approximately 2–3 light towers may be required. The equipment specifications of the necessary light towers would vary in terms of wattage, height, and size.

Methods

Figures 2-1 shows examples of light towers with shielding that are representative of what would be used on the Project.

2.2 Security Lighting

Lighting used for security purposes is expected to be shielded such that all light emitted by the fixture, either directly from the lamp or a diffusing element, or indirectly by reflection or refraction from any part of the luminaire, is projected below the horizontal. Where appropriate, lighting levels will be low-level, consistent with safety standards and local jurisdictional requirements, and installed to limit spillover glare offsite. Security lights will be aimed and controlled to confine light to the workspace area and objects intended to be illuminated, to the extent possible.

Security lighting may be used for yard construction activities. However, to accommodate short-term tasks, portable lighting that provides higher light levels as well as lights that need to be aimed above the horizontal may be used for short periods.

2.3 Substations

All substations that will be modified for the Project have existing lighting. In Valley Substation an existing station yard light at the dead end structure will be replaced with an LED type lighting that will conform to the night sky ordinance. The lighting will be shielded and will face down. The existing lighting to be replaced is a high pressure sodium type. Existing lighting is not motion controlled, but is on a photocell that turns off at night. If security is needed at a substation in areas where lighting is insufficient, temporary lighting may be used that meets the requirements of MM AES-5.

2.4 Dispute Resolution

If SCE receives a complaint regarding nighttime construction lighting via SCE's public information hotline or a local jurisdiction, SCE will work to resolve the dispute. The dispute resolution form (shown in Appendix A) will be completed by SCE Public Affairs and transmitted to Wilson project management for response and resolution. All nighttime lighting dispute resolutions will comply with local ordinances and will be documented on the dispute resolution form provided.

SECTION 3 PLAN APPROVAL

This Plan has been prepared to address MM AES-5. SCE requests review and approval of this Plan from the CPUC. If necessary, the Plan may be amended to reflect any information contained within subsequent clearance and approval documents.

References

SECTION 4 REFERENCES

California Public Utilities Commission. "Final Environmental Impact Report." *Southern California Edison Valley South Subtransmission Project*. (June 2016)

http://www.cpuc.ca.gov/environment/info/asp/valleysouth/Index_6_9_16.htm.

FIGURES

Figure 2-1 Representative Light Towers with Light Hoods



APPENDIX A

Nighttime Lighting Dispute Form

Dispute No.:

Valley South Subtransmission Project

The form is intended as documentation of any nighttime lighting complaint or disputes related to construction of Valley South Subtransmission Project. All complaints submitted via this **Nighttime Lighting Dispute Form** will be resolved per the Nighttime Lighting Dispute Process described in the Night Lighting Management Plan (for Compliance with Mitigation Measure AES-5).

1. CONTACT INFORMATION: to be completed by complainant

Name:		Submittal Date:	
Agency/Co.:			
Address:			
Phone Number:		Email Address:	

2. LIGHT TRESPASS/DISPUTE DETAILS: to be completed by complainant

Date of Trespass:		Time:	
Specific Location:			
Jurisdiction:			
Description of Trespass/Dispute (attach drawing as necessary):			

3. EFFORTS TO RESOLVE ABOVE LIGHT TRESPASS/DISPUTE: to be completed by SCE

Date Resolved:	
Parties Directly Responsible:	
Description of Action(s) Taken to Resolve Trespass/Dispute:	

4. CERTIFICATION OF DISPUTE RESOLUTION: to be completed by SCE

SCE's signature below certifies that SCE has taken efforts to satisfactorily resolve the nighttime lighting dispute documented above in accordance with the Night Lighting Management Plan and Mitigation Measure AES-5.

SCE Signature:		Date:	
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